

Zoological Record

Vol. 91, Sect. 18, 1954

# MAMMALIA

COMPILED BY

R. W. HAYMAN, F.Z.S.

LONDON

PUBLISHED BY

THE ZOOLOGICAL SOCIETY OF LONDON

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PRICE SEVEN SHILLINGS AND SIXPENCE

December, 1955

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2.—**Opinion 257.** Rejection for nomenclatorial purposes of the work by Zimmermann (A. E. W. von) published in 1777 under the title *Specimen Zoologiae geographicae, Quadrupedum Domitilia et Migrationes sistens* and acceptance for the same purposes of the work by the same author published in the period 1778–83 under the title *Geographische Geschichte des Menschen, und der allgemein verbreiteten vierfüssigen Thiere*. *Opin. int. Comm. zool. Nom.* 5 1954: 231–244.

3.—**Opinion 258.** Rejection for nomenclatorial purposes of the work by Frisch (J. L.) published in 1775 under the title *Das Natur-System der vierfüssigen Thiere*. *Opin. int. Comm. zool. Nom.* 5 1954: 245–252.

4.—**Opinion 271.** Addition to the Official List of Generic Names in Zoology of the generic names *Equus* Linnaeus, 1788 (Class Mammalia) and *Alca* Linnaeus, 1758 (Class Aves). *Opin. int. Comm. zool. Nom.* 6 1954: 41–50.

5.—**Opinion 273.** Suppression, under the plenary powers, of the anonymous pamphlet known as the *Hildesheim List* published in about the year 1840 and containing descriptions of new nominal species of mammals and birds from Java. *Opin. int. Comm. zool. Nom.* 6 1954: 63–74.

6.—**Anon.** Production of by-products. *Norsk Hvalfangsttid.* 43 1954: 25–27.

7.—**Anon.** Concerning the oil output in pelagic Antarctic whaling. *Norsk Hvalfangsttid.* 43 1954: 57–67.

8.—**Anon.** Pelagic operations in the Antarctic 1953/54. *Norsk Hvalfangsttid.* 43 1954: 80–84.

9.—**Anon.** The summer season 1953. *Norsk Hvalfangsttid.* 43 1954: 258–267.

10.—**Anon.** Antarctic whaling operations 1953/54. *Norsk Hvalfangsttid.* 43 1954: 309–320.

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14.—**Anon.** Whale marking performed by the “Slava” expedition. *Norsk Hvalfangsttid.* 43 1954: 591–592.

15.—**Anon.** The Japanese whaling industry. *Norsk Hvalfangsttid.* 43 1954: 625–631 3 figs.

16.—**Anon.** World catch 1953. *Norsk Hvalfangsttid.* 43 1954: 632–639.

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21.—**Anon.** Whaling in the North Pacific. *Proc. 7th Pacif. Sci. Congr.* 4 1953: 368–369.

22.—**Anon.** Liste des publications du Professeur Dr. H. Schouteden. *Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool.* 1 1954: xiii–xxviii.

23.—**Anon.** Eighth progress report on the cooperative study of the Devils Garden Interstate Deer Herd and its range. *Calif. Fish Game* 40 1954: 235–266 4 figs.

24.—**Anon.** East Suffolk and Norfolk River Board. Second annual report for the year ended 31st March, 1954. *Norwich*, 1954: 1–45.

25.—**Anon.** A mammoth tusk found in Slough. *Mid-Thames Nat. No.* 6 [1954]: 8 1 pl.



26.—Anon. Wild and feral mammals. Rep. Lundy Fld. Soc. No. 7 [1954]: 28.

27.—Anon. Verzeichnis der Wissenschaftlichen Arbeiten von Prof. med. et phil. R. N. Wegner. Wiss. Z. Univ. Greifswald Math.-Nat. R. 3 1954: 569-571.

28.—Anon. *Cercopithecus hamlyni* Pocock, specimen capturé à l'ouest de la rivière Otembo dans le territoire de l'Ephulu. Zooleo No. 27 1954: 420 pl.

29.—Anon. La naissance et la trépas d'un petit Okapi du Zoo d'Anvers. Zooleo No. 29 1954: 562-563.

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39.—Anon. Rat en Muis. Wagenin-gen. No. 3 1954: 51-62 figs.

40.—Anon. A rare bat. Ctry. Life, Lond. 116 1954: 1058.

41.—Anon. The courtship of the platypus—photographed for the first time [New York Zoo]. Ill. Lond. News 225 1944: 1114.

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Adams, C. E. see Hunter.

Adams, P. see Buckley.

43.—Aellen, V. Description d'un nouvel *Hipposideros* (Chiroptera) de la Côte d'Ivoire. Rev. suisse Zool. 61 1954: 473-483 2 figs.

44.—[Afanasyev, A. V., Bazhanov, V. S. and others]. [The animals of Kazakhstan]. Alma-Ata, 1953 pp.536. [N.V. Review, Zool. Zh. 33 1954: 237-240.] [In Russian.]

45.—Agar, W. E., Drummond, F. H., Tiegs, O. W. and Gunson, M. M. Fourth (final) report on a test of McDougall's Lamarckian experiment on the training of rats. J. exp. Biol. 31 1954: 307-321 4 figs.

46.—Aguayo, C. G. and Rivero, L. H. Sinopsis de los mamíferos cubanos. Circ. Mus. Malac. Habana 1954: 1283-1324.

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48.—[Akimushkin, I. I.] [Cephalopods in the food of sperm-whale.] C.R. Acad. Sci. URSS n.s. 96 1954: 665-667. [In Russian.]

49.—Ali, S. and Santapar, S. J. The abominable snowman. J. Bombay nat. Hist. Soc. 52 1954: 594-598 1 fig.

50.—Allen, G. E. Experiences with a dolphin. Sch. Nat. Stud. J. 49 1954: 60-61 figs.

51.—Allouse, B. E. A bibliography on the vertebrate fauna of Iraq and neighbouring countries. I. Mammals. Publ. Iraq nat. Hist. Mus. No. 4 1954: 1-30.

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57.—Angot, M. Observations sur les mammifères marins de l'Archipel de Kerguelen avec une étude détaillée de l'Elephant de mer, *Mirounga leonina* (L.). Mammalia, Paris 13 1954: 1-111 6 pls. 15 figs.

58.—Annison, E. F., Chalmers, M. I., Marshall, S. B. M. and Synge, R. L. M. Ruminant ammonia formation in relation to the protein requirement of sheep. III. Ruminant ammonia formation with various diets. J. agric. Sci. 44 1954: 270-273 7 figs.

59.—Anthony, H. E. George H. H. Tate (1894-1953). J. Mammal. 35 1954: 281-282.

60.—Anthony, H. E. George H. H. Tate. Säugetierk. Mitt. 2 1954: 176-177.

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64.—Arambourg, C. L'Atlantrophe de Ternifine un chaînon complémentaire de l'ascendance humaine fabriquait des bifaces chelléens. Nature, Paris No. 3235 1954: 401-404 8 figs.

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71.—Astre, G. Faune de l'Aurignacien supérieur de la Gravette en Périgord. Bull. Soc. Hist. nat. Toulouse 88 1953: 362-363.

Auerbach, C. *see* Falconer.

72.—Auerbach, R. Analysis on the developmental effects of a lethal mutation in the house mouse. J. exp. Zool. 127 1954: 305-329 18 figs.

73.—Austin, C. R. and Braden, A. W. H. Nucleus formation and cleavage induced in unfertilized rat eggs. Nature, Lond. 173 1954: 999-1000 1 fig.

74.—Austin, C. R. and Braden, A. W. H. Time relations and their significance in the ovulation and penetration of eggs in rats and rabbits. Aust. J. biol. Sci. 7 1954: 179-194 4 figs.

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Austin, C. R. *see* Braden.

Austwick, P. K. C. *see* McDiarmid.

77.—Azzali, G. Ricerche sulla neurosecrezione negli animali ibernanti. *Pubbl. Staz. zool. Napoli* 24 Suppl. 1954: 32-33.

78.—Azzali, G. Annotazioni citologiche sull' ipofisi dei chiroterteri nel letargo. *Monit. zool. ital.* 62 Suppl. 1954: 506-509.

79.—Azzaroli, A. Osservazioni sulla formazione villafranchiana di Olivola in Val di Magra. *Mem. Soc. tosc. Sci. nat.* 57A 1950: 104-112.

80.—Azzaroli, A. La sistematica dei cervi giganti e i cervi nani della isole. *Mem. Soc. tosc. Sci. nat.* 59A 1952: 119-127 3 figs.

81.—Azzaroli, A. Critical observations upon Siwalik deer. *Proc. Linn. Soc. Lond.* 165 1954: 75-83 7 figs.

82.—Azzaroli, A. Revisione della fauna dei terreni fluviolacustri del Valdarno Superiore. V. Filogenesi e biologia di *Sus strozzi* e di *Sus minor*. *Palaeont. Ital.* 48 1954: 41-76 12 pls. 12 figs.

83.—Bagenal, T. B. A stoat trapped on Great Cumbrae. *Scot. Nat.* 65 1953: 197.

84.—Baggs, J. W. Quenda near Perth. *W. Aust. Nat.* 4 1954: 171.

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90.—Baker, R. H. A hoary bat from northwestern Kansas. *Trans. Kansas Acad. Sci.* 57 1954: 196.

91.—Baker, R. H. and Findley, J. S. Mammals from Southeastern Alaska. *Publ. Mus. nat. Hist. Univ. Kansas* 7 1954: 473-477.

92.—Baker, R. H. and Villa, R. B. Mamíferos registrados por primera vez en el Estado de Hidalgo. *Rev. Soc. Mex. Hist. Nat.* 14 1953: 149-150.

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93.—Balcelsa, E. R. Quiropteros de cuevas catalanas: Campaña de 1952-53. *Speleon, Inst. Geol. Oviedo* 5 1954: 105-110.

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97.—Bannikov, A. G. List of the mammals of the Mongolian Peoples' Republic. Report Mongol. Comm. 51, Acad. Sci. U.S.S.R. Moscow 1953: 1-111 41 figs.

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101.—Bargallo, M. Nuevos yacimientos de Mammuthus y otros mamíferos en la region suroccidental del Lago de Chapala (Mexico). *Ciencia, Mexico* 12 1953: 107-108.



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- Barker, W. see Hill.
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- 114.—Bassett, E. G. and Phillips, D. S. M. Pelvic relaxation in sheep. Nature, Lond. 174 1954: 1020-1021.
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- 119.—Batty, I., Brambell, F. W. R., Hemmings, W. A. and Oakley, C. L. Selection of antitoxins by the foetal membranes of rabbits. Proc. roy. Soc. 142B 1954: 452-471. 11 figs.
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128.—Beer, J. R. A record of the hoary bat from a cave. J. Mammal. 35 1954: 116.

129.—Behn, U. Aufzucht von Vielfressen. Zool. Gart., Lpz. 20 1953: 77-81 4 figs.

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132.—[Belyavskaya, B. K.] [Hand-rearing beavers.] Nasimovich, A. A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. mesures) Moscow 1953: 171-190 8 figs. [In Russian]

133.—Benne-Jeant, C. La denture temporaire des hommes fossiles. C.R. Ass. franç. Av. Sci. 68 1950: 235-243 10 figs.

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138.—Bigalke, R. The discovery of the giraffe in South Africa. Fauna & Flora, Pretoria No. 2 1951: 24-28 1 fig.

139.—Bigalke, R. A note on the behaviour of a group of five spotted hyenas. Fauna & Flora, Pretoria No. 3 1953: 24-26 1 fig.

140.—Biggers, J. D. and Claringbold, P. J. Why use inbred lines? Nature, Lond. 174 1954: 596-597.

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141.—Bilewicz, S. and Mikiewiczowa, Z. Four cases of anomalous reproduction in white mice. Folia biol., Kraków 2 1954: 113-121. [English summary.]

142.—Billingham, R. E. and Sparrow, E. M. Studies on the nature of immunity to homologous grafted skin with special reference to the use of pure epidermal grafts. J. exp. Biol. 31 1954: 16-39 2 pls.

143.—Billingham, R. E., and others. Quantitative studies on tissue transplantation immunity. Proc. roy. Soc. 143B 1954: 43-58, 58-80.

144.—Bischoff, A. I. Abnormal fetal development from a mule deer. Calif. Fish Game 40 1954: 340-341 1 fig.

145.—Bishop, A. S. La glandula perianal de *Mephitis macroura* Lichtenstein y *Conepatus mesoleucus mesoleucus* (Lichtenstein). An. Inst. Biol. Univ. Méx. 25 1954: 463-472 9 figs.

146.—Bishop, M. W. H. and others. Semen characteristics and fertility in the bull. J. agric. Sci. 44 1954: 227-248 2 pls.

147.—Bjarnason, I., and Lingaas, P. Some weight measurements of whales. Norsk Hvalfangsttid. 43 1954: 8-11 1 fig.

148.—Björkman, N. Morphological and histochemical studies on the bovine placenta. Acta anat. Suppl. 22 1954: 1-91 26 figs.

149.—Blackmore, M. British bats. Bull. Mamm. Soc. Brit. Is. 1 1954: 8-10.

150.—Blackwood, B. Prof. E. A. Hooton. Nature, Lond. 173 1954: 1022.

151.—Blair, W. F. A melanistic race of the white-throated packrat (*Neotoma albigula*) in Texas. J. Mammal. 35 1954: 239-242.

152.—Blair, W. F. Tests for discrimination between four subspecies of deer mice (*Peromyscus maniculatus*) Texas J. Sci. 6 1954: 201-210.



- 153.—Blair, W. F. Mammals of the Mesquite Plains biotic district in Texas and Oklahoma, and speciation in the central grasslands. *Texas J. Sci.* 6 1954: 235–264 map.
- Blaisdell, J. A. *see* Dasmann.
- Blanchard, W. E. *see* Halloran.
- 154.—Blancou, L. Notes sur les mammifères de l'Equateur Africain Français. Le Gorille (2<sup>e</sup> note). *Mammalia*, Paris 18 1954: 170–180.
- 155.—Blancou, L. Notes sur les mammifères de l'Equateur Africain Français. Un Rhinoceros de Forêt? *Mammalia*, Paris 18 1954: 358–361.
- 156.—Blancou, L. Buffles d'Afrique. *Zooleo* No. 27 1954: 425–434 6 figs.
- 157.—Blandau, R. J. The effect of development when eggs and sperm are aged before fertilization. *Ann. N.Y. Acad. Sci.* 57 1954: 526–530.
- 158.—Blin, P. Recent classical findings on the thymus. The thymovegetative relation. *Bull. zool. Soc. Egypt* No. 10 1952: 26–50 2 figs.
- 159.—Bloch, S., Hediger, H., Müller, C. and Strauss, F. Probleme der Fortpflanzung des Feldhasen. *Rev. suisse Zool.* 61 1954: 485–490.
- 160.—Boback, A. Zur Frage des "Harnspritzens" beim Feldhasen, *Lepus europaeus* Pallas 1778. *Säugetierk. Mitt.* 2 1954: 78–79.
- 161.—Bodenheimer, F. S. On spontaneous malignant growth in the Levant vole, (*Microtus guentheri* D.A.). *Bull. res. Coun. Israel* 4 1954: 31–32 1 pl.
- 162.—Boerner-Patzelt, D. Wechselbeziehungen zwischen der frühen Entwicklung der Hypophyse und dem Entstehen ihres Blutgefäßsystems. *Z. mikr. anat. Forsch.* 60 1954: 104–136 20 figs.
- 163.—Boerner-Patzelt, D. Die Entwicklung des Pankreas vom Meerschweinchen. *Z. mikr. anat. Forsch.* 61 1954: 119–137 15 figs.
- 164.—Boetticher, H. V. Gehörnform und Entwicklungsrichtung. *Z. Säugetierk.* 18 1953: 137–145.
- 165.—Bolliger, A. The adrenals of the Koala (*Phascolarctos cinereus*) and their alleged relationship to eucalyptus leaf diet. *Med. J. Aust.* 40 (I) 1953: 917–919 4 figs.
- 166.—Bolliger, A. Oestrogen-induced organ transformations in an adolescent marsupial (*Trichosurus vulpecula*). *Aust. J. Sci.* 16 1954: 147.
- 167.—Bolliger, A. Organ transformation induced by oestrogen in an adolescent marsupial (*Trichosurus vulpecula*). *J. roy. Soc. N.S.W.* 88 1954: 33–39 3 pls.
- 168.—Booolootian, R. A. An analysis of subspecific variations in *Dipodomys nitratoides*. *J. Mammal.* 35 1954: 570–577 2 figs.
- 169.—Boom, H. P. A. de. The identification of biltong. *Fauna & Flora*, Pretoria No. 3 1953: 4–23 26 figs.
- 170.—Booth, A. H. A note on the colobus monkeys of the Gold and Ivory Coasts. *Ann. Mag. Nat. Hist.* 7 1954: 857–860 2 figs.
- 171.—Booth, A. H. The Dahomey Gap and the mammalian fauna of the West African forests. *Rev. Zool. Bot. Afr.* 50 1954: 305–314 map.
- Boothroyd, E. R. *see* Walker.
- 172.—Bopp, P. Biologische Beobachtungen an *Choloepus didactylus* L. in Gefangenschaft. *Verh. schweiz. naturf. Ges.* 133 1953: 100–101.
- 173.—Bopp, P. Schwanzfunktionen bei Wirbeltieren. Ein Beitrag zur vergleichenden Biologie und Psychologie der Wirbeltiere. *Rev. suisse Zool.* 61 1954: 83–151 24 figs.
- 174.—Bopp, P. Zur Topographie der Murmeltierterritorien. *Rev. suisse Zool.* 61 1954: 374–380 9 figs.
- 175.—Bopp, P. Einige biologische Beobachtungen am Zweizehenfaultier, *Choloepus didactylus* (Linné, 1766). *Säugetierk. Mitt.* 2 1954: 114–118 2 figs.
- 176.—Bornschein, H. & Viltar, V. Exploration électro-physiologique et histologique de la rétine d'un Mammifère nocturne: le Loir (*Myoxus glis* L.). *C.R. Soc. Biol. Paris* 148 1954: 525–528 1 fig.
- 177.—Borowiec, S. Interdependence between chewing musculature and dentition. *Folia morph.*, Warsz. 1 1950: 88–120 8 figs. [Polish with English summary.]
- Bortolami, R. *see* Tuchmann-Duplessis.

178.—Bouckaert, J. H. and Oyaert, W. A method of collecting fluid leaving the omasum of sheep. *Nature*, Lond. **174** 1954: 1195.

179.—Bouillon, J. and Leleup, N. Specimens de *Cephalophus nigrifrons kivuensis* Lönnberg sans glandes inguinales apparentes. *Rev. Zool. Bot. afr.* **49** 1954: 27-28.

180.—Bourdier, F. Remarques sur les faunes froides du Quaternaire francais anterieures au Wurm. *C.R. Soc. Geol. France* **4** 1954: 76-80.

181.—Bourlière, F. Les adaptations à la vie aquatique chez les mammifères. *Nature*, Paris No. 3233 1954: 1954: 321-325 8 figs.

182.—Bourlière, F. Le monde des Mammifères. Paris (Horizons de France) 1954: 224pp. 96 pls. 16 col. pls. [N.V. Review Mammalia, Paris **18** 1954: 334-335.]

183.—Bovey, R. Observations sur les Chiroptères du canton de Vaud et des régions voisines. *Bull. Soc. vaud. Sci. nat.* **66** 1954: 1-18 1 fig.

Bowman, H. S. *see* Svihla.

184.—Bowsher, D. A comparative study of the azygos venous system in man, monkey, dog, cat, rat, and rabbit. *J. Anat.*, Lond. **88** 1954: 400-406 4 pls.

185.—Boyle, C. L. Red deer in Ireland. *Oryx* **2** 1954: 394-395.

Bracher, F. *see* Strauss.

186.—Braden, A. W. H., Austin, C. R. and David, H. A. The reaction of the zona pellucida to sperm penetration. *Aust. J. biol. Sci.* **7** 1954: 391-409 1 pl.

187.—Braden, A. W. H. and Austin, C. R. The number of sperms about the eggs in mammals and its significance for normal fertilization. *Aust. J. biol. Sci.* **7** 1954: 543-551.

188.—Braden, A. W. H. and Austin, C. R. Fertilization of the mouse egg and the effect of delayed coitus and of hot-shock treatment. *Aust. J. biol. Sci.* **7** 1954: 552-565 4 figs.

189.—Braden, A. W. H. and Austin, C. R. The fertile life of mouse and rat eggs. *Science* **120** 1954: 610-611.

Braden, A. W. H. *see* Austin.

Brambell, F. W. R. *see* Batty.

190.—Brander, T. Om vertebrat-faunan i mellersta kyrkslätt (N.). *Memor. Soc. Fauna Flora fenn.* **29** 1954: 28-33.

191.—Brandt, K. Ein bearbeitetes Geweih vom Riesenhirsch. *Quartär.* **6** 1954: 139-140.

192.—Breathnach, A. S. and Goldby, F. The amygdaloid nuclei, hippocampus and other parts of the rhinencephalon in the porpoise (*Phocaena phocaena*). *J. Anat.*, Lond. **88** 1954: 267-291 2 pls. 9 figs.

193.—Bridges, W. It's the "Fear-some Warracaba Tiger". *Anim. Kingd.* **57** 1954: 25-28 1 fig.

194.—Briones, H. and Beatty, R. A. Interspecific transfers of rodent eggs. *J. exp. zool.* **125** 1954: 99-118 1 fig.

195.—Broadbrooks, H. E. A new subspecies of the pocket mouse (*Perognathus parvus*) from Washington. *J. Mammal.* **35** 1954: 95-99.

196.—Brochart, M. Attempted experimental production of identical twins in rabbits. *Nature*, Lond. **173** 1954: 160-162 2 figs.

197.—Brodal, A. and Gogstad, A. C. Rubro-cerebellar connections. An experimental study in the cat. *Anat. Rec.* **113** 1954: 455-485 14 figs.

198.—Bromage, T. N. Wolves in the Middle East. *Field*, Lond. **203** 1954: 703.

199.—[Bromlei, G. F.] [Test of wolf destruction in game reserves of Premore Land.] Nasimovich, A. A. Ed. *Reorg. vert. fauna U.S.S.R. (Biotech. measures)* Moscow 1953: 140-144 2 figs. [In Russian.]

200.—[Bromlei, G. F.] [Importance of marten as predator and means of its control in Premore Land.] Nasimovich, A. A. Ed. *Reorg. vert. fauna U.S.S.R. (Biotech. measures)* Moscow 1953: 167-170. [In Russian.]

201.—Brosset, A. Répartition et densité actuelle des carnivores dans le Département des Deux-Sèvres et les régions voisines. *Mammalia*, Paris **18** 1954: 216-218.

202.—Brough, J. B. White moles. *Field* **204** 1954: 126.

203.—**Browman, L. G.** Microphthalmia and maternal effect in the white rat. *Genetics* 39 1954: 261-264.

**Brown, E.** *see* Hauschka.

204.—**Brown, J. W.** The effect of protein deficiency on the submaxillary lymph nodes and spleens of albino rats. *Kans. Univ. Sci. Bull.* 36 1954: 41-54 2 figs.

205.—**Brown, J. W.** The effect of protein deficiency on the bone marrow and peripheral blood of young albino rats. *Kans. Univ. Sci. Bull.* 36 1954: 55-68.

206.—**Brown, J. W.** A quantitative study of cellular changes occurring in bone marrow following protein deficiency in the rat. *Anat. Rec.* 120 1954: 515-532 2 figs.

207.—**Brown, L. E.** Small mammal populations at Silwood Park Field Centre, Berkshire, England. *J. Mammal.* 35 1954: 161-176 3 figs.

208.—**Brown, S. G.** Dispersal in blue and fin whales. *Discovery Reports* 26 1954: 355-384 14 figs.

209.—**Brown, S. G.** The movements of fin and blue whales in Antarctic waters. *Norsk Hvalfangsttid.* 43 1954: 301-309 3 figs. [Summary of "Discovery" Report.]

210.—[**Brudastov, A. N.**] [Homoplastic replacement of cranial defects in rabbits.] *C.R. Acad. Sci. URSS n.s.* 94 1954: 161-164 2 figs. [In Russian.]

211.—**Brunner, G.** Das Fuchslotch bei Siegmansbrunn (Oberfr.) (Eine mediterrane Riss-Würm-Fauna). *Neues Jb. Geol. Pal. Abh.* 100 1954: 83-118 20 figs.

212.—**Buchanan, G. D. and Talmage, R. V.** The geographical distribution of the armadillo in the United States. *Texas J. Sci.* 6 1954: 142-150 maps.

213.—**Buckland, F. J.** Notes on native cats. *Vict. Nat., Melb.* 70 1954: 210-211.

214.—**Buckley, J. L., Spencer, D. L. and Adams, P.** Muskox (*Ovibos moschatus*) longevity. *J. Mammal.* 35 1954: 456.

215.—**Budker, P.** Whaling in French overseas territories. *Norsk Hvalfangsttid.* 43 1954: 320-326.

216.—**Budker, P.** Sur l'étymologie du mot "Rorqual." *Mammalia, Paris* 18 1954: 257-261.

**Bue, G. T.** *see* Erickson.

217.—[**Buinovski, N. A. and Khaverson, Y. I.**] [First find of skulls of Pleistocene camels in Siberia]. *Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.R.S.S.)* 19 1953: 79-81 1 fig. [In Russian.]

218.—**Bullier, P.** Alimentation et acclimatement d'Eléphants de mer (*Mirounga leonina* L.) en captivité au Parc zoologique de Vincennes. *Mammalia, Paris* 18 1954: 272-276 1 pl.

219.—**Burke, J. D.** Blood volume in mammals. *Physiol. Zool.* 27 1954: 1-21 10 figs.

220.—**Burns, K. F. and Farinacci, C. J.** Rabies in nonsanguivorous bats of Texas. *Science* 120 1954: 548.

221.—**Burns, M.** Observations on the development of the fleece and follicle population in Suffolk sheep. *J. agric. Sci.* 44 1954: 86-99 5 pls. 2 figs.

222.—**Burns, M.** The development of the fleece and follicle population in Herdwick sheep. *J. agric. Sci.* 44 1954: 443-464 4 pls. 4 figs.

**Burstall, T.** *see* Law.

**Burt, A. W. A.** *see* Tanner.

223.—**Burt, W. H.** The subspecies category in mammals. *Syst. Zool.* 3 1954: 99-104 3 figs.

224.—**Burton, M.** Armadillos and pangolins. *Ill. Lond. News* 224 1954: 132 3 figs.

225.—**Burton, M.** The colours of the river-horse. *Ill. Lond. News* 224 1954: 672-673 9 figs.

226.—**Burton, M.** Birth of a Kangaroo. *Ill. Lond. News* 225 1954: 338 2 figs.

227.—**Burton, M.** Growth rate of young kangaroos. *Ill. Lond. News* 225 1954: 804.

228.—**Butler, L.** The effect of the coat colour dilution gene on body size in the mouse. *Heredity* 8 1954: 275-278.

229.—**Butler, P. M.** Mammals (Spurn Peninsula). *Naturalist No.* 849 1954: 77-78.

230.—Butler, R. A. Curiosity in monkeys. *Sci. Amer.* **190** 2 1954: 70–75 figs.

231.—Butterfield, R. S. The slow loris as a pet. *Malayan Nat. J.* **9** 1954: 43–49 4 figs.

232.—Butterfield, R. T. Traps, live-trapping and marking of raccoons. *J. Mammal.* **35** 1954: 440–442 1 fig.

233.—Buttiker, W. Schlingen und Fallen in Süd-Rhodesien. *Acta Trop.*, Basel **11** 1954: 58–62 6 figs.

234.—Buxton, A. The deer of Epping Forest. *Oryx* **2** 1954: 241–245.

235.—Buxton, A. Giant fallow deer. *Oryx* **2** 1954: 392 1 pl.

236.—Buxton, A. Epping Forest and its deer. *Ctry. Life, Lond.* **116** 1954: 993–994.

237.—Cabrera, A. Los roedores Argentinos de la familia "Caviidae." *Pub. Esc. Vet. Fac. Agron. Vet. Univ. Buenos Aires* **6** 1954: 1–93 4 figs.

238.—Cabrera, A. Counter-proposal to certain portions of Dr. T. C. S. Morrison-Scott's application regarding the stabilization of the generic name for the Virginia Deer of America. *Bull. Zool. Nomencl.* **9** 1954: 299–300.

239.—Cadeo, G. C. Su un cranio di *Canis familiaris* proveniente dalla zona archeologica di Luni (La Spezia). *Natura, Milano* **45** 1954: 29–34.

240.—Cadeo, G. C. Su un cranio di *Canis lupus* L. dell' eta del bronzo rinvenuto a Rivarolo Mantovano (Mantova). *Atti Soc. ital. Mus. Civ. Stor. Nat. Milano* **93** 1954: 432–436 1 fig.

241.—Cahalane, V. H. Conserving wild life in the National Parks. *Proc. 7th Pacif. Sci. Congr.* **4** 1953: 646–652.

242.—Cahalane, V. H. Status of the black-footed ferret. *J. Mammal.* **35** 1954: 418–424.

243.—Calaby, J. H. Comments on Gilbert's note-book on marsupials. *W. Aust. Nat.* **4** 1954: 147–148.

244.—Caldwell, K. Changes in African big game code. *Field* **203** 1954: 48–49 6 figs.

245.—Cameron, A. W. The mammals of southeastern Quebec. *Rep. Provancher Soc. nat. Hist. Can.* **1950–51** [1952]: 20–86 figs.

Cameron, M. P. *see* Wolstenholme.

246.—Campana, D. D. Carnivori Quaternari della tecchia e della caverna di Equi nelle Alpi Apuane (Mustelidi, Canidi, Felidi). *Palaeont. Ital.* **44** 2 1954: 1–48 8 pls.

Caram, M. *see* Vrydagh.

247.—Carlisle, D. B. On the relationship between mammary, sweat, and sebaceous glands. *Quart. J. micr. sci.* **95** 1 1954: 79–83 4 figs.

Carnaby, I. C. *see* Serventy.

248.—Carne, P. H. Roe deer, fallow and sika. *Oryx* **2** 1954: 388–391.

249.—Carpenter, C. R. Grouping behaviour of howling monkeys. *Arch. néerl. Zool.* **10** Suppl. 2 1953: 45–50.

250.—Carr, E. B. The vesicula seminalis of the rabbit. *Proc. zool. Soc. Lond.* **124** 1954: 675–683 1 pl. 8 figs.

251.—Carrington, R. and Eden, M. Experiments in acclimatisation. *Ctry. Life, Lond.* **115** 1954: 288–289 5 figs.

252.—Carter, T. C. A mosaic mouse with an anomalous segregation ratio. *J. Genet.* **51** 1952: 1–6 1 pl. 1 fig.

253.—Carter, T. C. The genetics of luxate mice. III. Horseshoe kidney, hydronephrosis and lumbar reduction. *J. Genet.* **51** 1953: 441–457 1 pl. 8 figs.

254.—Carter, T. C. The genetics of luxate mice. IV. Embryology. *J. Genet.* **52** 1954: 1–35 2 pls. 21 figs.

255.—Carter, T. C. A search for chromatid interference in the male house mouse. *Z. Indukt.-Abstamm. Vererb.-Lehre* **86** 1954: 210–223 5 figs.

256.—Carter, T. C. and Falconer, D. S. Independence of linkage groups I, II, and XI in the house mouse. *J. Genet.* **51** 1953: 373–374.

257.—Carter, T. C., Lyon, M. F., and Phillips, R. J. S. Partial sex linkage in the mouse. *Nature, Lond.* **174** 1954: 309–310.

Cary, G. R. *see* Bartholomew.

258.—Casselmann, W. G. B. and Williams, G. R. Choline deficiency in the guinea pig. *Nature, Lond.* **173** 1954: 210–211.

259.—Castellanos, A. Anotações e retificações ao género "*Glyptodon*" Owen e à subfamília "*Glyptodontinae*." *An. Acad. bras. Sci.* **25** 1953: 391–410.



260.—Castellanos, A. Descripcion de restos de "*Paraglyptodon uquiensis*" n.sp. de Uquia (Senador Perez) de Jujuy. Mem. Mus. Entre Rios No. 32 1953: 1-28 2 pls.

261.—Castle, W. E. Coat colour inheritance in horses and in other mammals. *Genetics* 39 1954: 35-44.

262.—Cattaneo, L. Particolari nuovi sulla struttura del bulbo olfattivo dei mammiferi. Nota II. R.C. Ist. lombardo Cl. Sci. Mat. Nat. 84 1951: 579-584 2 pls.

263.—Cattelain, Une épizootie provoquée par la main de l'homme: la myxomatose. Rev. Doct. Pharm. France 42 21 1954: 7-17.

264.—Cave, A. J. E. Richard Owen and the discovery of the parathyroid glands. Science, Medicine and History, Oxford (Oxford Univ. Press) 1953: 217-222 3 figs.

265.—Cebullos, B. I. Clave dicotomica para ordenes de mamíferos del Cuzco. Rev. univ., Cuzco 41 1952: 120-125 [N.V.].

266.—Celestins, V. S. & Swartz, G. E. The origin and development of the ultimobranchial body in the golden hamster during the first fifteen days of gestation. Trans. Amer. micr. Soc. 73 1954: 322-327.

267.—Chace, L. Blackfish bonanza. Nat. Hist., N.Y. 63 1954: 38-40 5 figs.

268.—Chacko, P. I. and Mathew, M. J. Rorqual whale near Badagara, Malabar coast. J. Bombay nat. Hist. Soc. 52 1954: 585-586.

269.—Chaffee, R. G. *Campylodyton personi*, a new Oligocene carnivore from the Beaver Divide, Wyoming. J. Paleont. 28 1954: 43-46 4 figs.

270.—Chaigneau, M. and Charlet-Lery, G. Composition des gaz de digestion chez les Ruminants. C.R. Acad. Sci. Paris 239 1954: 308-310.

271.—Cabalka, J. L., Costa, R. R. & Hendrickson, G. O. Ecology of the raccoon in Central Iowa. Proc. Iowa Acad. Sci. 60 1954: 616-620.

272.—Chalmers, M. I., Cuthbertson, D. P. and Synge, R. L. M. Ruminal ammonia formation in relation to the

protein requirement of sheep. I. Duodenal administration and heat processing as factors influencing fate of casein supplements. J. agric. Sci. 44 1954: 254-262 4 figs.

273.—Chalmers, M. I. and Synge, R. L. M. Ruminal ammonia formation in relation to the protein requirement of sheep. II. Comparison of casein and herring-meal supplements. J. agric. Sci. 44 1954: 263-269 1 pl. 4 figs.

Chalmers, M. I. see Annison.

274.—Chamberlain, J. L. The Block Island meadow mouse *Microtus proventus*. J. Mammal. 35 1954: 587-589.

275.—Chance, M. R. A. The suppression of audiogenic hyperexcitement by learning in *Peromyscus maniculatus*. Brit. J. anim. Behav. 2 1954: 31-35.

276.—Chandrasekhar, M. S. On the feeding habits of bears. J. Bombay nat. hist. Soc. 51 1954: 934.

277.—Chang, M. C. Development of parthenogenetic rabbit blastocysts induced by low temperature storage of unfertilized ova. J. exp. zool. 125 1954: 127-149 15 figs.

Chapman, D. G. see Kenyon.

Charlet-Lery, G. see Chaigneau.

278.—Charnot, Y. De l'évolution des camelidés, apparition du dromadaire au Maroc. Bull. Soc. Sci. nat. Maroc 33 1954: 207-230 3 pls.

Chaudhuri, G. C. see Sharma.

279.—Cheng, D. W. and Thomas, B. H. Relationship of time of therapy to teratogeny in maternal avitaminosis E<sup>1</sup>. Proc. Iowa Acad. Sci. 60 1954: 290-299 2 figs.

280.—Chiasson, R. B. The phylogenetic significance of rodent cheek pouches. J. Mammal. 35 1954: 425-427.

281.—Chiasson, R. B. Occurrence of *Zalophus californianus* in the Gulf of California. J. Mammal. 35 1954: 596.

282.—Chiquoine, A. D. The identification, origin, and migration of the primordial germ cells in the mouse embryo. Anat. Rec. 118 1954: 135-146 6 figs.

283.—Chittleborough, R. G. Studies on the ovaries of the humpback whale, *Megaptera nodosa* (Bonnaterre), on the western Australian coast. Aust. J. Mar. Freshw. Res. 5 1954: 35-63 6 pls. 9 figs.



- 284.—Chitty, D. and Southern, H. N. Control of rats and mice. Oxford (Clarendon Press) 1954. Vol. I Rats. xxxii + 305 4 pls. 18 figs. Vol. II. Rats xvi + 226 4 pls. 12 figs. Vol. III House Mice xiv + 225 8 pls. 21 figs.
- 285.—Church, B. M., Jacob, F. H. and Thompson, H. V. Surveys of rabbit damage to wheat in England and Wales, 1950-52. Plant Pathology 2 1953: 107-112 1 pl.
- 286.—Cipriani, A. Posizione delle grandi ali dello sfenoide in primati platirrini e catarrini (Saggio preliminare). Riv. Anthropol. 40 1953: 148-188 4 pls. 6 figs.
- Claringbold, P. J. *see* Biggers.
- Clark, J. G. D. *see* Fraser and King.
- Clark, P. J. *see* Dice.
- 287.—Clarke, R. Open boat whaling in the Azores. The history and present methods of a relic industry. 'Discovery' Rep. 26 1954: 281-354 6 pls.
- 288.—Clarke, R. A great haul of ambergris. Nature, Lond. 174 1954: 155-156 1 fig.
- 289.—Clarke, R. A great haul of ambergris. Norsk Hvalfangsttid. 43 1954: 450-53 1 fig.
- 290.—Clarke, R. Whales and seals as resources of the sea. Norsk Hvalfangsttid. 43 1954: 489-510 5 figs.
- 291.—Clarke, R. Whales and whaling. Advanc. Sci. 11 1954: 305-311.
- 292.—Clarke, R. and Ruud, J. T. International co-operation in whale marking, the voyage of the "Enern" to the Antarctic 1953. Norsk Hvalfangsttid. 43 1954: 128-146 3 figs.
- Cleffmann, G. *see* Danneel.
- 293.—Clegg, E. J. The arterial supply of the seminal vesicle and coagulating gland in the rat, and the effects of its interruption. Proc. Soc. Study Fertility, No. 5 1953: 71-81 3 pls. 1 fig.
- 294.—Clover, M. R. Deer marking devices. Calif. Fish Game 40 1954: 175-181 6 figs.
- 295.—Clover, M. R. A portable deer-trap and catch-net. Calif. Fish Game 40 1954: 367-373 4 figs.
- 296.—Cockrum, E. L. Non-geographic variation in cranial measurements of wild-taken *Peromyscus leucopus noveboracensis*. J. Mammal. 35 1954: 367-376.
- 297.—Cohrs, P. and Schulz, L. Cl. Artspezifische Hypertrophie des Kleinhirnwurms bei Säugetieren, verbunden mit partiellen Rindenaplasien. Anat. Anz. 101 1954: 23-36 21 figs.
- 298.—Cole, J. E. Buffalo (*Bison bison*) killed by fire. J. Mammal. 35 1954: 453-454.
- 299.—Collyer, E. The mammals of Hazelborough Woods. J. Northants. nat. Hist. Soc. 33 1954: 227-229.
- 300.—Conaway, C. H. The reproductive cycle of rice rats (*Oryzomys palustris palustris*) in captivity. J. Mammal. 35 1954: 263-266.
- 301.—Condry, W. British Mammals. The polecat in Wales. Oryx 2 1954: 238-240.
- 302.—Connell, J. H. Home range and mobility of brush rabbits in California chaparral. J. Mammal. 35 1954: 392-405 6 figs.
- 303.—Conti, S. Morfologia comparata craniale ed encefalica degli orsi pleistocenici della Liguria. Correlazione con alcune forme attuali (*U. arctos*, *U. marsicanus*, *U. horribilis*). Mem. Mus. Stor. nat. Genova No. 1 1954: 1-66 9 pls. 9 figs.
- 304.—Cook, A. H. Some measurements from a three and one-half year old beaver (*Castor canadensis*). J. Mammal. 35 1954: 452.
- 305.—Cook, E. F. A technique for preventing post-mortem ectoparasite contamination. J. Mammal. 35 1954: 266-267.
- 306.—Cook, H. J. A remarkable new mammal from the Lower Chadron of Nebraska. Amer. Midl. Nat. 52 1954: 388-391 5 figs.
- 307.—Cook, S. F. and Hannon, J. P. Metabolic differences between three strains of *Peromyscus maniculatus*. J. Mammal. 35 1954: 553-560.
- Cook, S. F. *see* Heizer.
- 308.—Cooley, R. Second record of the hoary bat in Florida. J. Mammal. 35 1954: 116-117.

- 309.—Cooper, H. M. Kangaroo Island's wild pigs. Their possible origin. *S. Aust. Nat.* **28** 1954: 57-61 3 figs.
- 310.—Copley, H. H. J. Allen Turner. *J. E. Afr. Ug. nat. Hist. Soc.* **22** 1954: 111-112 1 pl.
- 311.—Coppini, L. and Muto, R. Dispositivi anatomici di alcune formazioni fibrose del mediastino in alcuni mammiferi domestici. *Monit. zool. ital.* **61** 1954: 172-174.
- Corner, W. G. *see* Pallie.
- Costa, R. R. *see* Cabalka.
- 312.—Cotterell, Sir R. Three against the grey squirrel. *Field* **203** 1954: 12-13 8 figs.
- Couch, L. K. *see* Johnson.
- 313.—Coulombre, J. L. and Russell, E. S. Analysis of the pleiotropism at the w-locus in the mouse. *J. exp. Zool.* **126** 1954: 277-295 14 figs.
- Counce, S. *see* Hoecker.
- 314.—Couto, C. de P. On a Noto-styloid from the Paleocene of Itaboraí. Brazil. *Amer. Mus. Novit.* No. 1693 1954: 1-5 3 figs.
- 315.—Couturier, M. A. J. L'ours brun *Ursus arctos* L. Grenoble. 1954: xi + 904 226 figs.
- 316.—Cowan, H. H. Weasel v. Rabbit. *Ctry. Life, Lond.* **116** 1954: 997.
- 317.—Cowan, I. McT. La conservación de la fauna silvestre y el desarrollo hidroeléctrico en la Columbia Británica. *Techn. Meeting Internat. Union Protect. Nature, Caracas* **1952** [1954]: 298-301.
- 318.—Cowan, I. McT. The occurrence of the Pleistocene wolf *Canis dirus* in the Rocky Mountains of Central Alberta. *Canad. Fld. Nat.* **68** 1954: 44.
- 319.—Cowan, I. McT. and Arsenault, M. G. Reproduction and growth in the creeping vole, *Microtus oregoni* *serpens* Merriam. *Canad. J. Zool.* **32** 1954: 198-208. 2 figs.
- Cowan, I. McT. *see* Robinson.
- Cowan, W. M. *see* Powell.
- 320.—Crandall, L. S. Duck-billed platypus. *Zoo Life, Lond.* **9** 1954: 73-76 2 figs.
- 321.—Crespo, J. A. Presence of the reddish howling monkey (*Alouatta guaribana clamitans* Cabrera) in Argentina. *J. Mammal.* **35** 1954: 117-118.
- Crespo, J. A. *see* Llanos.
- Cronmiller, F. P. *see* Robinson.
- Crowcroft, Mrs. *see* Godfrey.
- 322.—Crowcroft, P. The daily cycle of activity in British shrews. *Proc. zool. Soc. Lond.* **123** 1954: 715-729 9 figs.
- 323.—Crowcroft, P. Experiments with shrews. *Ctry. Life, Lond.* **115** 1954: 1314-1315 5 figs.
- 324.—Crowcroft, W. P. Mouse research in Suffolk. *Trans. Suffolk Nat. Soc.* **8** [1954]: 185-187.
- 325.—Crowcroft, W. P. British shrews. *Bull. Mamm. Soc. Brit. Is.* **1** 1954: 10-11.
- 326.—Crusafont Pairo, M. Primer hallazgo de un jirafido fosil en el Meotico del Valles. *Mem. Comun. Inst. Geol. Dip. Prov. Barcelona* **10** 1953: 11-12.
- 327.—Crusafont Pairo, M. El sistema Miocénico en la depresión española del Valles-Penedes. *Mem. Comun. Inst. Geol. Dip. Prov. Barcelona* **10** 1953: 13-23.
- 328.—Crusafont Pairo, M. Cuestiones zoogeográficas en la paleomastología del Neógeno español. *Mem. Comun. Inst. Geol. Dip. Prov. Barcelona* **10** 1953: 25-40.
- 329.—Crusafont Pairo, M. Sobre el origen de *Triceromeryx*. Immigrante o autóctono? *Consejo Sup. Invest. Cient. Estud. Geol.* **20** 1953: 509-517 fig. [N.V.]
- 330.—Crusafont Pairo, M. Quelques considerations biologiques sur le Miocene espagnol. *Ann. Paleont.* **40** 1954: 97-103.
- 331.—Crusafont Pairo, M. and Lavocat, R. *Schizochocerus*, un nuevo genero de Suidos del Pontien inferior (Vallesiense) del Vallés-Penedes. *Notas Comun. Inst. Geol. Min. Espana* **36** 1954: 81-90 2 figs.
- 332.—Crusz, H. and Fernand, V. S. V. The trematode parasites of the dugong with descriptions of two new monostomes and histopathological changes in the host. *J. Parasit.* **40** Sect. 1 1954: 499-507 2 pls.

333.—Curri, S. B. and Tischendorf, F. Eine verbesserte Clark-Sandisonsche Kammer zur Lebendbeobachtung am Kaninchenohr. *Anat. Anz.* **100** 1954: 354-360 3 figs.

334.—Curzon, G. Longitudinal distribution of organic component of bone. *Nature, Lond.* **174** 1954: 646-647 1 fig.

Cuthbertson, D. P. *see* Chalmers.

335.—Dalcq, A.-M. Nouvelles données structurales et cytochimiques sur l'œuf des mammifères. *Rev. gén. Sci. pur. appl.* **61** 1954: 19-41 13 figs.

336.—Dalimier, P. Quelques observations au sujet du Mouflon à manchettes. *Mammalia, Paris* **18** 1954: 331-333 1 pl.

Dallemagne, M. J. *see* Gerebtzoff.

337.—Dalquest, W. W. and Werner, H. J. Histological aspects of the faces of North American bats. *J. Mammal.* **35** 1954: 147-160 1 pl. 1 fig.

338.—Danneel, R. and Cleffmann, G. Die Einwanderung der Pigmentzellen in die Haut und die Haare bei Nagetieren. *Biol. Zbl.* **73** 1954: 414-428 16 figs.

339.—Darling, F. F. Caribou, Reindeer and Moose in Alaska. *Oryx* **2** 1954: 280-285.

Darling, F. F. *see* Leopold.

340.—Dart, R. A. The adult female lower jaw from Makapansgat. *Nature, Lond.* **173** 1954: 286-287 2 figs.

341.—Dart, R. A. The second, or adult, female mandible of *Australopithecus prometheus*. *Amer. J. phys. Anthropol.* **12** 1954: 313-344 11 figs.

Dasman, R. F. *see* Taber.

342.—Dasman, W. P. and Blaisdell, J. A. Deer and forage relationship on the Lassen-Washoe interstate winter deer range. *Calif. Fish Game* **40** 1954: 215-234 5 figs.

343.—Dathe, H. Ringelrobbe, *Phoca hispida annellata* Nilsson, 1820, in der westlichen Ostsee. *Säugetierk. Mitt.* **2** 1954: 33.

344.—Dathe, H. Ringelrobbe, *Phoca hispida annellata* Nilsson, 1820, in der westlichen Ostsee. *Säugetierk. Mitt.* **2** 1954: 81.

345.—Dathe, H. Eine Wildkatze, *Felis s. silvestris* Schreber, 1777, in Nordwestsachsen. *Säugetierk. Mitt.* **2** 1954: 128.

Davey, J. B. *see* Sorsby.

David, H. A. *see* Braden.

346.—Davies, A. W. and Worden, A. N. The liver vitamin A reserves of some British wild animals. *Proc. zool. Soc. Lond.* **123** 1954: 739-746.

347.—Davies, D. V. and Hill, W. C. O. The abdominal portion of the alimentary system in "Hapalemur" and "Lepilemur." *Proc. roy. Soc. Edinb.* **65B** 1954: 182-204 2 pls. 6 figs.

Davies, D. V. *see* Hill.

348.—Davis, W. B. and Russell, R. J. Aves y mamíferos del Estado de Morelos. *Rev. Soc. Mex. Hist. Nat.* **14** 1953: 77-147.

349.—Davis, W. B. and Russell, R. J. Mammals of the Mexican state of Morelos. *J. Mammal.* **35** 1954: 63-80.

350.—Dawbin, W. H. Maori whaling. *Norsk Hvalfangsttid.* **43** 1954: 433-445 10 figs.

351.—Dawbin, W. H. and Falla, R. A. A contribution to the study of the humpback whale based on observations at New Zealand shore stations. *Proc. 7th Pacif. sci. Congr.* **4** 1953: 373-382 map.

352.—Dearden, L. C. Extra pre-molars in the river otter. *J. Mammal.* **35** 1954: 125-126.

353.—Dehaut, G. Considérations sur l'histoire évolutive des Vertébrés insulaires dans la région méditerranéenne occidentale. *Bull. Mus. Hist. nat., Paris.* **26** (2) 1954: 413-418.

354.—Deinse, A. B. v. The pelvic bones of *Physeter macrocephalus* L. *Zool. Meded.* **33** 1954: 25-32 2 pls.

355.—Dekeyser, P. L. and Villiers, A. Essai sur le peuplement zoologiques terrestre de l'Ouest Africaine. *Bull. Inst. franç. Afr. noire* **16A** 1954: 957-970.

356.—de la Torre, L. Bats from southern Tamaulipas, Mexico. *J. Mammal.* **35** 1954: 113-116.

357.—de la Torre, G. D. The Guanaco. *Oryx* **2** 1954: 273-279 1 fig.

358.—de la Tour, G. D. The Vicuña. *Oryx* 2 1954: 347-352 1 pl. 1 fig.

359.—de la Tour, G. D. La preservación de la fauna en region semiarida. II. Las zonas semiaridas del interior del Gran Chaco, pp. 415-421. III. La region semiarida de la Pampa Argentina, pp. 421-431. Techn. Meeting Internat. Union Protect. Nature, Caracas 1952 [1954].

360.—de la Tour, G. D. and Finsterbusch, C. A. Preservación de la fauna en las zonas semiaridas de las Cordilleras Chileno-Argentinas. Techn. Meeting Internat. Union Protect. Nature, Caracas 1952 [1954]: 432-438.

361.—Della Serra, O. A seqüência eruptiva dos dentes definitivas nos símios *Platyrrhina* e sua interpretação filogenética. *Folia clin. biol.* S. Paulo 19 1953: 41-46.

362.—DeMeules, D. H. Possible anti-adrenalin action of shrew venom. *J. Mammal.* 35 1954: 425.

363.—Denyes, H. A. Habitat restriction and the digging ability of certain pocket mice. *J. Mammal.* 35 1954: 453.

364.—Deol, M. S. The anomalies of the labyrinth of the mutants Varitint-waddler, shaker-2 and jerker in the mouse. *J. Genet.* 52 1954: 562-588 6 pls. 23 figs.

365.—[Deparme, N. K.] [The method of age determination in moles.] *Bull. Soc. Nat. Moscow Biol.* 59 1954: 10-25 figs. [In Russian.]

Depreux, R. *see* Olivier.

366.—[Derevyanko, I. L. and Zharkov, I. V.] [Winter food supply for wild ungulates in Caucasian game reserve.] Nasimovich, A. A., Ed. *Reorg. vert. fauna U.S.S.R.* (Biotech. measures) Moscow 1953: 80-93 3 figs. [In Russian.]

367.—Dexter, R. W. Notes on nests of the meadow jumping mouse, *Zapus hudsonius*. *J. Mammal.* 35 1954: 121.

368.—Dexter, R. W. Distribution of the meadow jumping mouse *Zapus hudsonius* in Ohio. *J. Mammal.* 35 1954: 233-239.

369.—Dice, L. R. Breeding of *Peromyscus floridanus* in captivity. *J. Mammal.* 35 1954: 260.

370.—Dice, L. R. and Clark, P. J. The statistical concept of home range as applied to the recapture radius of the deer mouse (*Peromyscus*). *Contr. Lab. Vertebr. Biol. Univ. Mich.* No. 62 1953: 1-15.

371.—Didier, R. Etude systématique de l'os pénién des mammifères (suite). *Rongeurs. Mammalia, Paris* 18 1954: 237-256 14 figs.

372.—Dieterlen, F. Über den Haarbau des Andenwolfes *Dasycyon hagenbecki* (Krumbiegel, 1949). *Säugetierk. Mitt.* 2 1954: 26-31 12 figs.

373.—Dissel-Scherff, M. C. van and Vervoort, W. Development of the teeth in fetal *Balaenoptera physalis* (L.) (Cetacea, Mystacoceti) I-II. *Proc. Acad. Sci. Amst.* 57C 1954: 196-210 12 figs.

374.—Dobzhansky, T. Animal breeding under Lysenko. *Amer. Nat.* 88 1954: 164-166.

375.—Dolyak, F. and Leone, C. A. Some standard values of the blood and serum of the cotton rat *Sigmodon hispidus texianus*. *Trans. Kansas Acad. Sci.* 56 1953: 242-245.

Donauvov, G. G. *see* Gavrin.

Donini, I. *see* Ottaviani.

376.—Donovan, D. T. An occurrence of mammoth and other bones at Whatley, Somerset. *Proc. Speleol. Soc., Bristol* 7 1954: 51-53.

377.—Dorr, J. A., Jr. *Hypsoparia bozemanensis*; a new genus and species of leptarctine mustelid from the late Miocene Madison Valley formation of Montana. *Ann. Carnegie Mus.* 33 1954: 179-184 1 pl.

378.—Dorst, J. Précisions sur un Rhinolophidé rare du Tonkin. *Mammalia, Paris* 18 1954: 212-215 1 fig.

379.—Dorst, J. Décisions de nomenclature au Congrès international de Zoologie de Copenhague. *Mammalia, Paris* 18 1954: 219-220.

380.—Dorst, J. G. H. H. Tate, 1894-1953. *Mammalia, Paris* 18 1954: 222.

381.—Dorst, J. La longévité des Chiroptères. *Mammalia, Paris* 18 1954: 231-236.

382.—Doutt, J. K. Observations on mammals along the east coast of Hudson Bay and the interior of Ungava. *Ann. Carnegie Mus.* **33** 1954: 235-249.

383.—Doutt, J. K. The swimming of the opossum, *Didelphis marsupialis virginiana*. *J. Mammal.* **35** 1954: 581-583.

384.—Dow, R. L. Walrus skull (*Odobenus*) from Bluehill Bay, Maine. *J. Mammal.* **35** 1954: 444.

385.—Downey, S. Time for a rest. *Field, Lond.* **203** 1954: 452 1 fig.

386.—Dozier, H. L. Muskrat production and management. *Circ. U.S. Fish. Wildl. Serv. No. 18* 1953: 1-42 53 figs.

Drake, C. H. *see* Miller.

Drimmer, F. *see* Goodwin.

Drummond, F. H. *see* Agar.

387.—Dry, F. W. and Stephenson, S. K. Presence and absence of the prenatal check in lambs' birthcoats. *Nature, Lond.* **173** 1954: 878-879.

388.—[Dubinin, V. B. and Garutt, V. E.] [The mammoth skeleton found in the delta of the river Lena.] *Zool. Zh., Moscow* **33** 1954: 423-432 9 figs. [In Russian.]

389.—[Dubrovo, I. A.] [On the first discovery of the primitive elephant, *Elephas meridionalis* Nesti, in northern Siberia]. *Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.S.S.R.)* **19** 1953: 76-79 2 figs. [In Russian.]

390.—Dujarric de la Rivière, R. and Eyquem, A. Les groupes sanguins chez les animaux. (Individualités sanguines et tissulaire). Paris, (Editions Medicales Flammarion) 1953: pp. 407 2 pls. 6 figs.

391.—[Dulkeit, G. D.] [Importance of lynx and wolverine as predators in natural complex of Altaitaiga]. *Nasimovich, A.A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures)* Moscow 1953: 147-152. [In Russian.]

Dumas, P. C. *see* Freiburg.

Duncan, A. *see* Barnes.

392.—Dunlop, G. Rickets in sheep. *Nature, Lond.* **173** 1954: 453 2 figs.

393.—Dunn, L. C. and Gluecksohn-Waelsch, S. A genetical study of the mutation 'fused' in the house mouse, with evidence concerning its allelism with a similar mutation 'kink.' *J. Genet.* **52** 1954: 383-391.

394.—Durand, P. and Mathis, M. Sensibilité de trois rongeurs sauvages tunisiens *Mus musculus spretus*, *Dipodillus campestris* et *Meriones shawi* au *Plasmodium berghei* Vincke et Lips 1948. *C.R. Ass. franç. Av. Sci.* **70** 1951: 39-45.

395.—Durrant, S. D. and Hansen, R. M. Taxonomy of the chickarees (*Tamiasciurus*) of Utah. *J. Mammal.* **35** 1954: 87-95.

396.—Durrant, S. D. and Hansen, R. M. Distribution patterns and phylogeny of some western ground squirrels. *Syst. Zool.* **3** 1954: 82-85 1 fig.

397.—Durrant, S. D. and Hansen, R. M. A new rock squirrel (*Citellus variegatus*) from the Great Basin with critical comments on related subspecies. *Proc. Biol. Soc. Wash.* **67** 1954: 263-272.

398.—Eadie, W. R. Skin gland activity and pelage descriptions in moles. *J. Mammal.* **35** 1954: 186-196 1 fig.

399.—Eales, N. B. The manus of the Narwhal, *Monodon monoceros* L. *Proc. zool. Soc. Lond.* **124** 1954: 201-211 6 figs.

400.—Eaton, O. N. Heterosis in the performance of mice. *Genetics* **38** 1954: 609-629 4 figs.

Eaton, O. N. *see* Yao.

401.—Eayrs, J. T. An apparatus for analysing the pattern of spontaneous activity in laboratory animals. *Brit. J. Anim. Behav.* **2** 1954: 20-24 2 pls. 2 figs.

402.—Eayrs, J. T. Spontaneous activity in the rat. *Brit. J. Anim. Behav.* **2** 1954: 25-30 4 figs.

403.—Eayrs, J. T. The vascularity of the cerebral cortex in normal and cretinous rats. *J. Anat., Lond.* **88** 1954: 164-173 4 figs.

404.—Ehardt, H. Verhaltensweisen von Islandpferden in einem norddeutschen Freigelände. *Säugetierk. Mitt.* **2** 1954: 145-154 4 figs.

405.—Ecke, D. H. An invasion of Norway rats in southwest Georgia. *J. Mammal.* **35** 1954: 521-525 2 figs.

Eden, M. *see* Carrington.

406.—Edinger, T. and Kitts, D. B. The foramen ovale. *Evolution* **8** 1954: 389-404 4 figs.



- 407.—Edmond-Blanc, F. Il faut protéger le gorille. Zooleo No. 28 1954: 493-498 figs.
- 408.—Edwards, R. G. Colchicine-induced heteroploidy in early mouse embryos. Nature, Lond. 174 1954: 276-277.
- 409.—Ehrenberg, K. Fossilfunde aus der Dachsteineishöhle. Anz. Akad. Wiss. Wien 90 1953: 14-18.
- 410.—Ehrenberg, K. Ergänzende Bemerkungen zu der Fossilfunden aus der Dachsteineishöhle. Anz. Akad. Wiss. Wien 90 1953: 152-154.
- 411.—Ehrenberg, K. Bericht über Ausgrabungen in der Salzofenhöhle im Toten Gebirge. VII. Beobachtungen und Funde der Salzofen-Expedition 1953. Anz. Akad. Wiss. Wien 90 1953: 273-281.
- 412.—Ehrenbrand, F. Beiträge zur Morphokinese der Nebennierenrinde bei experimenteller Hyperthyreose. Anat. Anz. 101 1954: 41-63 5 pls.
- 413.—Eibl-Eibesfeldt, I. Zur Ethologie des Hamsters (*Cricetus cricetus* L.). Z. Tierpsychol. 10 1953: 204-254 48 figs.
- 414.—Eichler, W. Ektoparasiten von Zoo-Tieren. II. *Haematomyzus*, die Elefantenlaus. Zool. Gart., Lpz. 20 1953: 113-121 6 figs.
- 415.—Eigener, W. Bergtapire. Z. Säugetierk. 19 1954: 178-180.
- 416.—Eiseley, L. C. Fossil man. Sci. Amer. 189 6 1953: 65-72 figs.
- 417.—Eiseley, L. C. The reception of the first missing links. Proc. Amer. phil. Soc. 98 1954: 453-465.
- 418.—Ekblom, T. Studien über subfossile Lemuren von Madagaskar. Bull. geol. Inst. Univ. Upsala 34 1949-53: 123-190 pls. 1-5 text-figs. 1-2 56 tables.
- Elias, H. see Gershbain.
- 419.—Ellerman, J. R. Die taksonomie van die soogdiere van die Unie van Suid-Afrika. Ann. Univ. Stellenbosch 30A 1 1954: 1-125.
- 420.—Ellerman, J. R. and Morrison-Scott, T. C. S. *Ictonyx* Kaup, 1835, the correct generic name, and *Ictonyx striatus* (Perry), 1810, the correct specific name for the African stink-muishond. J. Mammal. 35 1954: 130-131.
- 421.—Ellison, N. F. Otter in North Wirral, Cheshire. Northw. Nat. N.S. 2 1954: 138.
- 422.—Ellison, N. F. Bottle-nosed whales in Mersey. Northw. Nat. N.S. 2 1954: 460.
- 423.—Ellison, N. F. Lesser rorqual on Lancashire coast. Northw. Nat. N.S. 2 1954: 460.
- 424.—Eloff, F. C. On the probable significance of an additional pterygoid element found in the dog's skull. S. Afr. J. Sci. 50 1954: 296-298.
- 425.—Elsey, C. A. A case of cannibalism in Canada Lynx (*Lynx canadensis*). J. Mammal. 35 1954: 129.
- 426.—Elton, C. S. Further evidence about the barren-ground grizzly bear in northeast Labrador and Quebec. J. Mammal. 35 1954: 345-357 1 fig.
- Enders, R. K. see Llewellyn.
- 427.—Engel. Fortpflanzungsbiologie des Rehwilds. Oesterr. Weidwerk 1954: 3-4: 32. [N.V.]
- 428.—Engel, S. Respiratory tissue of the large whales. Nature, Lond. 173 1954: 128-129 1 fig.
- 429.—Ennouchi, E. Sur un récent apport paléontologique. C.R. Soc. Sci. nat. Maroc 20 1954: 71-74 3 figs.
- 430.—Ennouchi, E. La faune néolithique de Toulkine (Haut Atlas). C.R. Soc. Sci. nat. Maroc 20 1954: 140-141.
- 431.—Ennouchi, E. *Omochoerus maroccanus* nov. sp. nouveau Suidé marocain. Bull. Soc. Geol. France (6) 3 1954: 649-656 2 figs.
- 432.—Epstein, H. Le dromadaire dans l'Ancien Orient. Rev. Hist. Sci. 7 1954: 247-268 9 figs.
- 433.—Erdbrink, D. P. On one of the oldest known remains of the common elk, *Alces alces* L., found recently in the Netherlands. Geol. Mijnb. 16 1954: 301-309 1 fig.
- 434.—Erickson, A. B. Helminth parasites of rabbits of the genus *Sylvilagus*. J. Wildlife Mgmt. 11 1947: 255-263.
- 435.—Erickson, A. B. and Bue, G. T. Additional mule deer records for Minnesota. J. Mammal. 35 1954: 457-458.

436.—Ernst, R. Die Bedeutung der Wandepidermis (Hyponychium) des Pferdehufes für die Hornbildung. *Acta Anat.* 22 1954: 15-48 18 figs.

437.—Errington, P. L. On the conservation of the lynx in Scandinavia. *J. Mammal.* 35 1954: 254-255.

438.—Errington, P. L. On the hazards of overemphasizing numerical fluctuations in studies of "cyclic" phenomena on muskrat populations. *J. Wildlife Mgmt.* 18 1954: 67-90 8 figs.

439.—Errington, P. L. The special responsiveness of minks to epizootics in muskrat population. *Ecol. Monogr.* 24 1954: 377-393.

440.—Erskine, R. Clearing up rabbits with the long net. *Field* 204 1954: 171 2 figs.

441.—Evans, D. H. L. and Murray, J. G. Histological and functional studies of the fibre composition of the vagus nerve of the rabbit. *J. Anat., Lond.* 88 1954: 320-337 3 pls. 2 figs.

442.—Ewer, R. F. Some adaptive features in the dentition of Hyaenas. *Ann. Mag. Nat. Hist.* (12) 7 1954: 188-194 2 pls.

443.—Ewer, R. F. The fossil carnivores of the Transvaal caves. The Hyaenidae of Kromdraai. *Proc. zool. Soc. Lond.* 124 1954: 565-584 3 pls. 11 figs.

Eyquem, A. *see* Dujarric de la Rivière.

444.—Falconer, D. S. Selection for large and small size in mice. *J. Genet.* 51 1953: 470-501 9 figs.

445.—Falconer, D. S. Linkage in the mouse: The sex-linked genes and "rough." *Z. Indukt-Abstamm Vererb-Lehre* 86 1954: 263-268.

446.—Falconer, D. S. and Latyszewski, M. The environment in relation to selection for size in mice. *J. Genet.* 51 1952: 67-80 4 figs.

447.—Falconer, D. S. and King, J. W. B. A study of selection limits in the mouse. *J. Genet.* 51 1953: 561-581 1 pl. 5 figs.

448.—Falconer, D. S., Slizynski, B. M. and Auerbach, C. Genetical effects of nitrogen mustard in the house mouse. *J. Genet.* 51 1952: 81-88 1 pl.

Falconer, D. S. *see* Carter.

Falkenbach, C. H. *see* Schultz.

449.—Falla, R. A. Southern seals: Population studies and conservation problems. *Proc. 7th Pacif. sci. Congr.* 4 1953: 706.

Falla, R. A. *see* Dawbin.

Farinacci, C. J. *see* Burns.

450.—Fay, F. H. Quantitative experiments on the food consumption of *Parascalops breweri*. *J. Mammal.* 35 1954: 107-109.

451.—[Fedorov, V. K.] [New data on succession of acquired features in mice.] *C.R. Acad. Sci. URSS n.s.* 94 1954: 953-955. [In Russian.]

452.—Fedrigo, G. and Bergamini, L. Osservazioni sulla origine embriologica e sulla natura chimica di "sostanze mucoze" presenti nell'apparato genitale femminile di feto e neonati bovini ed ovini. *Monit. zool. ital.* 62 1954: 45-52.

453.—Fenner, F. The rabbit plague. *Sci. Amer.* 190 2 1954: 30-35 9 figs.

454.—Fenykovi, J. In search of giant sable. *Field, Lond.* 203 1954: 650-651 5 figs.

455.—Ferembach, D. La mandibule et les dents inférieurs des Limnopithecus. *C.R. Acad. Sci. Paris* 239 1954: 1656-1658.

456.—Ferguson, K. A. Prolonged stimulation of wool growth following injections of ox growth hormone. *Nature, Lond.* 174 1954: 411 1 fig.

457.—Ferianc, O. Contribution to the question of geographical races of the common wood shrew mouse *Sorex araneus* L. in Slovakia and comments to its ecology. *Mém. Soc. zool. tchéosl.* 16 1952: 218-236. [Czech with English summary.]

458.—F., G. L'hybridation chez les mammifères. *Nature, Paris* No. 3236 1954: 460-462 3 figs.

459.—Field, H. Wolves in the Near East. *Field, Lond.* 203 1954: 406.

460.—Filloux, J. C. Les processus intellectuels chez les animaux. I. Les tests d'intelligence. *Nature, Paris* No. 3225 1954: 28-32 10 figs.

461.—Filloux, J. C. Les processus intellectuels chez les animaux. 2. La pensée symbolique. *Nature, Paris* No. 3226 1954: 64-67 5 figs.

462.—Filloux, J. C. La vie affective des animaux. 2. Les conduits d'angoisse. Nature, Paris No. 3235 1954: 429-432 6 figs.

463.—Findlay, J. Cattle for the Northlands. Field, Lond. 203 1954: 693-694 3 figs.

464.—Findley, J. S. Tree roosting of the eastern Pipistrelle. J. Mammal. 35 1954: 433.

465.—Findley, J. S. Reproduction in two species of *Myotis* in Jackson Hole, Wyoming. J. Mammal. 35 1954: 434.

466.—Findley, J. S. Competition as a possible limiting factor in the distribution of *Microtus*. Ecology 35 1954: 418-420 1 fig.

467.—Findley, J. S., Jones, J. K. and Vaughan, T. A. Records of mammals from southwestern Iowa. Trans. Kansas Acad. Sci. 57 1954: 212-213.

Findley, J. S. *see* Baker.

Findley, J. S. *see* Jones.

Findley, J. S. *see* Russell.

468.—Finley, R. B. *Notiosorex crawfordi* and *Antrozous pallidus* from southeastern Colorado. J. Mammal. 35 1954: 110-111.

Finsterbusch, C. A. *see* de la Tour.

Firtion, F. *see* Theobald.

469.—Fischel, W. Intelligenz und Einsicht der Affen. Arch. néerl. Zool. 10 Suppl. 2 1953: 13-23.

470.—Fisher, H. D. Delayed implantation in the harbour seal, *Phoca vitulina* L. Nature, Lond. 173 1954: 879-880.

Fisher, K. C. *see* Ryckman.

471.—Fitch, H. S. Seasonal acceptance of bait by small mammals. J. Mammal. 35 1954: 39-47.

472.—Fleay, D. Australia's Pouched "Cat." Nat. Hist., N.Y. 63 1954: 86-92 8 figs.

473.—Fleay, D. The Squirrel Glider. Vict. Nat., Melb. 70 1954: 208-210 2 pls.

474.—Fleay, D. Australia's Squirrel Gliders. Anim. Kingd. 57 1954: 187-190 4 figs.

475.—Flecker, H. Plea for retention of vernacular name *Echidna*. N. Qd. Nat. 22 108 1954: 23-24.

Flerov, K. K. *see* Vialov.

476.—Fletcher, H. O. "Face lift" for museum's giant sloth. Aust. Mus. Mag. 11 1954: 218-221 1 fig.

477.—Fletcher, H. O. Giant marsupial remains at Brewarrina, New South Wales. Aust. Mus. Mag. 11 1954: 247-251 figs.

478.—Florio, A. Il gyrus cerebellaris nei Felidae. (Considerazioni sul cortex visivo di *Felis domestica* Briss.). Boll. Zool. 20 1953: 17-28 2 pls.

479.—Florio, A. Il gyrus ectosagittalis posterior nei Canidae. (Considerazioni sul cortex uditivo di *Canis familiaris* L.). Boll. Zool. 20 1953: 29-34 1 pl.

480.—Florio, A. Il territorio sylviano nei Canidae. (Note di morfologia e di anatomia microscopica). Arch. zool. ital. Napoli 38 1954: 287-322 1 pl.

481.—Flux, D. S. Note on variations in the udders of monozygotic cattle twins. N.Z. J. Sci. Tech. 36A 1954: 287.

Folley, S. J. *see* Richardson.

482.—Foran, W. R. Elephants at sea. Field 204 1954: 172.

483.—Forman, B. Walrus at Collieston. Scot. Nat. 66 1954: 56-57 1 fig.

484.—[Formosov, A. A.] [Recent literature on paleolithic of Kazakhstan and Central Asia.] Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.S.S.R.) 19 1953: 90-92.

485.—Forsthoefel, P. F. A study of the effect of heterozygosis on litter size in the mouse *Mus musculus*. Ohio J. Sci. 54 1954: 135-141.

486.—Foster, A. E. C. The British thoroughbred horse. Proc. roy. Instn. G.B. 35 1954: 583-598 3 pls. 1 fig.

487.—Foster, M. Wright's studies of effects of maternal age on spotting and polydactyly in the guinea pig. Ann. N.Y. Acad. Sci. 57 1954: 491-493.

488.—Frank, F. Beitrag zur Biologie, insbesondere Jugendentwicklung der Schneemaus (*Chionomys nivalis* Mart.). Z. Tierpsychol. 11 1954: 1-9 5 figs.

489.—Frank, F. Beiträge zur Biologie der Feldmaus, *Microtus arvalis* (Pallas). Teil I: Gehegeversuche. Zool. Jb. (Syst.) 82 1954: 354-404 5 figs.

490.—Frank, F. Zur Jugendentwicklung der Feldspitzmaus (*Crocidura leucodon* Herm.). Bonn. Zool. Beitr. 5 1954: 173–178.

491.—Frank, F. Die Kausalität der Nagetier-Zyklen im Lichte neuer populationsdynamischer Untersuchungen an deutschen Microtinen. Z. Morph. Ökol. 43 1954: 321–356.

Frankie, G. *see* Vincke.

492.—Fraser, A. S. Factors in the genetic determination of fleece structure in sheep. J. Genet. 51 1953: 222–236 10 figs.

493.—Fraser, A. S. A note on the growth of the rex and angora coats. J. Genet. 51 1953: 237–242 1 pl. 5 figs.

494.—Fraser, A. S., Sobey, S. and Spicer, C. C. Mottled, a sex-modified lethal in the house mouse. J. Genet. 51 1953: 217–221 1 pl. 1 fig.

Fraser, A. S. *see* Nay.

495.—Fraser, F. C. and King, J. E. Faunal remains. In Clark, J. G. D. Excavations at Star Carr, an early mesolithic site at Seamer near Scarborough, Yorkshire. Cambridge (Univ. Press) 1954: 70–89 2 pls. 3 figs.

496.—Fraser, F. C. and Purves, P. E. Fractured carbonates of blue whales. Scot. Nat. 65 1953: 154–156 2 figs.

497.—Fraser, F. C. and Purves, P. E. Hearing in Cetaceans. Bull. Brit. Mus. (Nat. Hist.) Zool. 2 1954: 101–114 2 pls.

498.—Frechkop, S. Le magot ou singe de Berberie. C.R. Comm. 70th Congr. A.F.A.S., Tunis, May 1951, Fasc. 4: 1–15 4 figs.

499.—Frechkop, S. Notes sur les mammifères. XL. Le port de la tête et la forme du crâne chez les Singes (1). Bull. Inst. Roy. Sci. Nat. Belg. 30 12 1954: 1–11 3 figs.

500.—Frechkop, S. Mammifères. Explor. Parc nat. Upemba Miss. de Witte No. 14 1954: 1–84 3 pls. 12 figs.

501.—Frechkop, S. Les relations génétiques entre les anthropomorphes et les autres singes. Vol. Jub. Victor van Straelen, 1925–1954, Brussels 1954: 1027–1062 21 figs.

502.—Frechkop, S. Professor Max Westenhöfer on the problem of man's origin. Eugenics Review 46 1 1954: 41–48 2 figs.

503.—Frechkop, S. and others. Animaux protégés au Congo Belge et dans le territoire sous mandat du Ruanda-Urundi ainsi que les espèces dont la protection est assurée en Afrique (y compris Madagascar) par la Convention internationale de Londres du 8 Novembre 1933 pour la protection de la faune et de la flore africaines, avec la législation concernant la chasse, la pêche, la protection de la nature, et les Parcs Nationaux au Congo Belge et dans le Territoire sous mandat du Ruanda-Urundi. Institut des Parcs Nationaux du Congo Belge, Brussels, 4th ed. 1953: pp. 433 figs. maps.

Freeman, J. S. *see* Wolstenholme.

504.—Freiburg, R. E. and Dumas, P. C. The elephant seal (*Mirounga angustirostris*) in Oregon. J. Mammal. 35 1954: 129.

French, M. H. *see* Sykes.

505.—Friant, M. A propos de la dentition des mammifères les plus anciens. Rev. Stomatol. 51 1950: 358–361 4 figs.

506.—Friant, M. Les caractéristiques fondamentales du cerveau des *Giraffidae*. C.R. Acad. Sci. Paris 235 1952: 978–979 1 fig.

507.—Friant, M. Les caractéristiques fondamentales du cerveau des ongulés (Ungulata) périssodactyles et artiodactyles. C.R. Acad. Sci. Paris 238 1954: 516–518 2 figs.

508.—Friant, M. Sur la forme du cerveau de l'éléphant (*Loxodonta africana* Blum.), au cours de la vie prénatale. C.R. Acad. Sci. Paris 238 1954: 1534–1535.

509.—Friant, M. A propos du *pallium* cérébral des Carnivores arctoides et du *Potamotherium* fossile en particulier. C.R. Acad. Sci. Paris 239 1954: 104–105 1 fig.

510.—Friant, M. Les principales caractéristiques du cerveau des ordres actuels d'Ongulés (Ungulata sensu lat.): Proboscidea, Hyracoidea, Perissodactyla, Artiodactyla, Sirenia. C.R. Acad. Sci. Paris 239 1954: 1004–1006.

511.—Friant, M. Sur l'extension progressive de l'*Insula* cérébrale, des singes inférieures aux Anthropoïdes et des Anthropoïdes à l'Homme. C.R. Acad. Sci. Paris 239 1954: 1422–1423. 1 fig.



- 512.—Friant, M. Sur les affinités du *Plagiaular*, mammifère mésozoïque. Proc. zool. Soc. Lond. **124** 1954: 501-507 7 figs.
- 513.—Friant, M. Sur les rongeurs fossiles de Lagoa Santa, Minas Geraes, Bresil. L'évolution des molaires du groupe des Echimyinae (Echimyidae). Vidensk. Medd. Dansk nat. Foren. **116** 1954: 233-250 7 figs.
- 514.—Friant, M. Le cerveau du Lamantin (*Manatus inunguis* Natterer). Vjschr. naturf. Ges. Zürich **99** 1954: 129-135 6 figs.
- 515.—Friant, M. Le cerveau d'un rongeur, le Cabiai *Hydrochoerus capybara* Erxl. Acta anat. **21** 1954: 239-248 7 figs.
- 516.—Friant, M. Sur la morphologie du troisième sillon arque du cerveau, chez les Ongulés artiodactyles. Acta Anat. **22** 1954: 328-330 1 fig.
- 517.—Frick, H. Die Entwicklung und Morphologie des Chondrokraniums von *Myotis* Kaup. Stuttgart (Georg Thieme) 1954: pp. viii + 102 46 figs.
- 518.—Freilli, A. Some remarks on the application of the minimum size regulation to fin whales in the Antarctic. Norsk Hvalfangsttid. **43** 1954: 330-338.
- 519.—Fujino, K. On the serological constitution of the sperm and Baird beaked whales (I) Blood groups of the sperm and Baird beaked whales. Sci. Rep. Whales Res. Inst. Tokyo No. 9 1954: 105-120.
- 520.—Fujino, K. On the body proportions of the fin whales *Balaenoptera physalus* (L.) caught in the northern Pacific Ocean. (I.) Sci. Rep. Whales Res. Inst. Tokyo No. 9 1954: 121-163 7 figs.
- Fujino, K. see Omura.
- 521.—Fuller, W. A. The first premolar and the canine tooth in *Bison*. J. Mammal. **35** 1954: 454-456 1 pl.
- 522.—Gaal, I. Nouvel examen des vestiges de mammifères du Pliocène à Hatvan et à Godollo et la division du Pliocène. Foldt. Kozlon. **83** 1953: 263-272 2 figs. [In Hungarian.]
- 523.—Gaal, I. Über einige neuerliche untersuchte pliozäne Säugetierreste aus Hatvan und Godollo. Foldt. Kozlon. **84** 1954: 79-81.
- 524.—Gaffrey, G. Partielle Leukismus bei einer Brandmaus *Apodemus agrarius* (Pallas, 1771). Säugetierk. Mitt. **2** 1954: 81.
- 525.—Gaffrey, G. Zur Ernährungsweise des Wildkaninchens, *Oryctolagus cuniculus* (Linné, 1758). Säugetierk. Mitt. **2** 1954: 81.
- 526.—Gaffrey, G. Ortsgebundene Scheinjad bei einer afghanischen Windhündin. Z. Tierpsychol. **11** 1954: 144-146.
- 527.—Gale, L. E., Gibson, M. R. and Scott, P. M. Investigation of the reported toxicity to rats of *Gliricidia sepium*, Jacq. Science **120** 1954: 500-501.
- 528.—Gale, L. R. and Pierce, R. A. Occurrence of the coyote in Kentucky. J. Mammal. **35** 1954: 256-258.
- Gallizioli, S. see Wallmo.
- 529.—Gandal, C. P. Age determination in mammals. Trans. N.Y. Acad. Sci. (2) **16** 1954: 312-314.
- 530.—Garst, W. E. Black-footed ferret in South Dakota. J. Mammal. **35** 1954: 594.
- Garutt, V. E. see Dubinin.
- 531.—Gaselee, J. The grey squirrel campaign. Ctry. Life, Lond. **115** 1954: 156-157 4 figs.
- Gates, A. see Runner.
- 532.—Gates, A. H. and Beatty, R. A. Independence of delayed fertilization and spontaneous triploidy in mouse embryos. Nature, Lond. **174** 1954: 356-357.
- 533.—Gathy, M. P. Le lapin sauvage, ses mœurs et sa nuisance. J. Soc. cent. Agric. Belg. **101** 1954: 2-32.
- 534.—Gaughran, G. R. L. A comparative study of the osteology and myology of the cranial and cervical regions of the Shrew, *Blarina brevicauda*, and the mole, *Scalopus aquaticus*. Misc. Publ. Mus. Zool. Univ. Mich. **80** 1954: 1-82 23 pls.
- 535.—[Gavrin, V. F. and Donaurov, S. S.] [The wolf in Bialovezha game-reserve.] Zool. Zh., Moscow **33** 1954 904-924. [In Russian.]
- Gawain, G. C. V. see Gilbert.
- 536.—Gayford, B. A mole with a purpose. Ctry. Life, Lond. **115** 1954: 42-44.

537.—Gedymin, J. Juvenile and seasonal changes in the hair-covering of rabbits of fur breeds. *Prace Kom. roln. Lesn.*, Poznań 2 1954: 1-53 14 figs. [Polish with English summary.]

538.—Gee, E. P. Further observations on the Great Indian One-horned Rhinoceros (*R. unicornis* Linn.) J. Bombay nat. Hist. Soc. 51 1953: 765-772 2 pls.

539.—Gee, E. P. Wild life preservation in India: Annual report for 1953 on the Eastern Region. J. Bombay nat. Hist. Soc. 52 1954: 233-240.

540.—Gee, E. P. The most famous rhino. *Nat. Hist.*, N.Y. 63 1954: 366-369 4 figs.

541.—Gee, E. P. Preserving Indian wild life. *Ctry. Life*, Lond. 116 1954: 2001-2002 5 figs.

542.—Geeter, L. de. Etudes sur la structure de l'œuf vierge et les premiers stades du développement chez le cobaye et le lapin. *Arch. Biol. Paris* 65 1954: 363-436 1 pl. 14 figs.

543.—Gehr, F. A wood-chuck who needed tooth-straightening. *Nat. Hist.*, N.Y. 63 1954: 310-311 4 figs.

544.—[Geptner, V. G.] [Interspecific variation and distribution of *Spermophilopsis leptodactylus* Licht, *Mammalia*, Glires.] *Zool. Zh.*, Moscow 33 1954: 1157-1170. [In Russian.]

545.—Gerber, E. Über die Säugetierreste aus den Karlsruhe-Schottern bei Bern. *Eclog. Geol. Helvet.* 46 1953 (1954): 298-300 1 fig.

546.—Gerber, R. Die Zweifarbiges Fledermaus *Vespertilio m. murinus* Linné, 1758, für Leipzig und Schandau nachgewiesen. *Säugetierk. Mitt.* 2 1954: 33.

547.—Gerebtzoff, M. A., Philippot, E. and Dallemagne, M. J. Recherches histochemiques sur les acétylcholine et choline-esterases. 2. Activité enzymatique dans les muscles lents et rapides des mammifères et des oiseaux. *Acta anat.* 20 1954: 234-257 10 figs.

548.—Gergely, J. Histophysiological researches on the genitalia of white mice treated with *Secale cornutum* alkaloids. (Detailed study of the periods of oestrous). *Ann. Biol. hung.* 2 1954: 395-403 2 pls.

549.—Gershbein, I. L. and Elias, H. Observations of the anatomy of the rat liver. *Anat. Rec.* 120 1954: 85-97 15 figs.

Ghadially, F. N. *see* Whiteley.

550.—Giban, J. Test d'efficacité pratique d'un ratonelle. *Ann. Égypt.* 5 1954: 79-85.

Gibson, M. R. *see* Gale.

551.—Gilbert, P. F. and Gawain, G. C. V. Some micro-ultrasonic effects on maze learning and retention in the albino rat. *J. Sci. Labs. Denison Univ.* 43 3-5 1953: 61-65.

552.—Gilbert, P. W. The premandibular head cavities in the opossum, *Didelphys virginiana*. *J. Morph.* 95 1954: 47-75 28 figs.

553.—Gill, E. D. Extinct giant kangaroo from the Nepean Peninsula, Victoria. *Vict. Nat.*, Melb. 70 1954: 212-216 2 pls. 3 figs.

554.—Gill, E. D. Ecology and distribution of the extinct giant marsupial, "*Thylacoleo*." *Vict. Nat.*, Melb. 71 1954: 18-35 12 pls.

555.—Gill, E. D. The validity of the Lower Tertiary Possum, *Wynyardia bassiana*. *Aust. J. Sci.* 17 1954: 69.

556.—Gill, I. Das Entstehen der Drehungsflächen, einer anormalen Bildung an den letzten Molaren der Elefanten. *Wiss. Z. Univ. Greifswald. Math.-Nat. R.* 3 1954: 557-567 17 figs.

557.—Girolamo, A. de. Osservazioni sulle architetture gliali dell'encefalo di Nutria *Myopotamus coypus*. *Monit. zool. ital.* 61 Suppl. 1953: 144-146.

558.—Giroud, A. and others. Étude de malformations oculaires chez le fœtus de rat déficient en acide folique. *Arch. Anat. micr. Morph. exp.* 43 1954: 21-41 9 figs.

559.—Glass, R. P. Aberrant coloration in *Tadarida mexicana*. *Amer. Midl. Nat.* 52 1954: 400-402 1 pl.

Glauert, L. *see* Serventy.

560.—Glenister, T. W. Observations on the development and radiology of the Père David's Deer foetus (*Elaphurus davidianus*). *Proc. Zool. Soc. Lond.* 123 1954: 757-763 2 pls. 1 fig.

- 561.—Glimstedt, G. and Lagerstedt, S. Observations on the ultrastructure of isolated mitochondria from normal rat liver. *Acta Univ. lund. N.F.* **49** 3 1954: 1-11 4 pls. 1 fig.
- 562.—Gloor, U. Untersuchungen über das Schicksal ungesättigter Fettsäuren und aliphatischer Kohlenwasserstoffe im Tierkörper. Basel (Apollonia Verlag) 1953: pp. 55.
- 563.—Glover, R. Black Sika Deer. *Ctry. Life, Lond.* **116** 1954: 656, 659.
- 564.—Glover, T. and Mann, T. On the composition of boar semen. *J. agric. Sci.* **44** 1954: 355-360 1 fig.
- Glueckson-Waelsch, S. *see* Dunn.
- 565.—Godfrey, G. K. (Mrs. Crowcroft). Use of radioactive isotopes in small-mammal ecology. *Nature, Lond.* **174** 1954: 951-952.
- 566.—Goehring, H. H. *Pipistrellus subflavus obscurus*, *Myotis keenii*, and *Eptesicus fuscus fuscus* hibernating in a storm sewer in central Minnesota. *J. Mammal.* **35** 1954: 434-435.
- Gogstad, A. C. *see* Brodal.
- Goldby, F. *see* Breathnach.
- Goldfarb, N. L. *see* Korzhuev.
- 567.—Goldie, H. and others. Leukocyte counts in the blood from the tail and the heart of a mouse. *Science* **119** 1954: 353-354.
- 568.—[Golov, B. A.] [Trap for *Ellobius talpinus*.] *Bull. Soc. Nat. Moscow biol.* **59** 5 1954: 95-96 fig. [In Russian.]
- 569.—Goodall, A. M. and Yang, S. H. The vascular supply of the skin of Ayrshire calves and embryos. *J. agric. Sci.* **44** 1954: 1-4 3 pls. 2 col. figs.
- 570.—Goodpaster, W. W. and Hoffmeister, D. F. Life history of the golden mouse *Peromyscus nuttalli*, in Kentucky. *J. Mammal.* **35** 1954: 16-27 1 pl. 2 figs.
- Goodpaster, W. W. *see* Hoffmeister.
- 571.—Goodwin, E. G. M. Lesser horseshoe bat in Shropshire. *Oryx* **2** 1954: 247-248.
- 572.—Goodwin, G. G. Southern records for arctic mammals and a northern record for Alfaro's rice rat. *J. Mammal.* **35** 1954: 258.
- 573.—Goodwin, G. G. A new harvest mouse of the genus *Reithrodontomys* from Tamaulipas, Mexico. *Amer. Mus. Novit.* No. 1660 1954: 1-3.
- 574.—Goodwin, G. G. A new short-tailed shrew and a new free-tailed bat from Tamaulipas, Mexico. *Amer. Mus. Novit.* No. 1670 1954: 1-3.
- 575.—Goodwin, G. G. A new short-tailed shrew from western Panama. *Amer. Mus. Novit.* No. 1677 1954: 1-2.
- 576.—Goodwin, G. G. Mammals from Mexico collected by Marian Martin for the American Museum of Natural History. *Amer. Mus. Novit.* No. 1689 1954: 1-16.
- 577.—Goodwin, G. G. Mammals in Drimmer F. (ed.). *The Animal Kingdom*, New York (Doubleday and Co. Inc.) 1954: vol. 1: 1-680 ill. Vol. 2: 681-874 ill.)
- 578.—Goodwin, R. F. W. Blood-sugar in foetal and neonatal mammals. *Nature, Lond.* **173** 1954: 777-778.
- 579.—Gopalakrishna, A. Breeding habits of the Indian sheath tailed bat *Taphozous longimanus* (Hardwicke). *Curr. Sci.* **23** 1954: 60-61.
- 580.—Gordon, D. C. Melanism in the varying hare *Lepus americanus virginianus*. *J. Mammal.* **35** 1954: 122.
- 581.—Gorodiski, A. and Lavocat, R. Première découverte de Mammifères dans le Tertiaire (Lutétien) du Sénégal. *C.R. Soc. Geol. France* **15** 1953: 315-317.
- 582.—Goslin, R. M. Eastern big-eared bat in Ohio. *J. Mammal.* **35** 1954: 430-431.
- 583.—Goto, H. E. Fruit bats. *Zoo Life, Lond.* **9** 1954: 16-18 3 figs.
- 584.—Gould, D. J. and Miesse, M. L. Recovery of a Rickettsia of the Spotted Fever Group from *Microtus pennsylvanicus* from Virginia. *Proc. Soc. exp. Biol., N.Y.* **85** 1954: 558-561.
- 585.—Gould-Marks, L. The great grey kangaroo. *Zoo Life, Lond.* **9** 1954: 55-57 2 figs.
- Gowers, W. *see* Hill.
- 586.—Gracie, W. McA. The menace of the wild rabbit. *Quart. J. For.* **46** 1952: 166-170.

587.—Graham, M. A. Detection of the sex of cat embryos from nuclear morphology in the embryonic membrane. *Nature*, Lond. **173** 1954: 310–311 2 figs.

588.—Graham, M. A. Sex chromatin in cell nuclei of the cat from the early embryo to maturity. *Anat. Rec.* **119** 1954: 469–491 18 figs.

589.—Grahn, D. Genetic variation in the response of mice to total body X-irradiation. I. Body weight response of six inbred strains: 39–61 7 figs. II. Organ weight response of six inbred strains: 63–83 7 figs. *J. exp. Zool.* **125** 1954.

590.—Gray, A. P. Mammalian hybrids—a checklist with bibliography. Commonwealth Bureau Anim. Breed. Genet. Edinburgh Tech. Comm. 10 1954: pp. x + 144.

591.—Gray, F. V., Pilgrim, A. F. and Weller, R. A. Functions of the omasum in the stomach of the sheep. *J. exp. Biol.* **31** 1954: 49–55.

Gray, F. V. *see* Weller.

592.—Grazi, S. and Rugani, F. Contributi alla conoscenza del tessuto sottocutaneo dei Vertebrati. Nota 1. *Cavia cobaya*. *Monit. zool. ital.* **62** 1954: 114–121 1 fig.

593.—Gresson, R. A. R. The food of badgers. *Irish Nat. J.* **11** 1954: 203–205.

594.—[Grigaryev, P. P.] [On a second litter in moles of Belorussia.] *Zool. Zh., Moscow* **33** 1954: 717–719. [In Russian.]

Gromov, I. M. *see* Vereshchagin.

595.—Grozđanić, S. Les problèmes de Darwinisme; La vie instinctive de *Meacus cynomolgus*. *Arch. biol. Sci., Beograd.* **2** 1950: 127–133.

596.—Grüneberg, H. Genetical studies on the skeleton of the mouse. IV. Quasi-continuous variations. *J. Genet.* **51** 1952: 95–114 3 figs.

597.—Grüneberg, H. Genetical studies on the skeleton of the mouse. VI. Danforth's short-tail. VII. Congenital hydrocephalus. *J. Genet.* **51** 1953: 317–326 1 pl. 5 figs., 327–358 2 pls. 32 figs.

598.—Grüneberg, H. The relations of microphthalmia and White in the mouse. *J. Genet.* **51** 1953: 359–362.

599.—Grüneberg, H. Genetical studies on the skeleton of the mouse. VIII. Curly-tail. *J. Genet.* **52** 1954: 52–67 11 figs.

600.—Grüneberg, H. Genetical studies on the skeleton of the mouse. XII. The development of undulated. *J. Genet.* **52** 1954: 441–455 7 pls. 3 figs.

601.—Grüneberg, H. Variation within inbred strains of mice. *Nature*, Lond. **173** 1954: 674–676.

602.—Grzimek, B. Les pauvres captifs du zoo. *Zooleo* No. 23 1953: 201–206 col. pl.

603.—Grzimek, B. Über den Potto. *Zool. Gart., Lpz.* **20** 1953: 67–73 9 figs.

604.—Grzimek, B. Die Gorillas ausserhalb Afrikas. *Zool. Gart., Lpz.* **20** 1953: 173–185 4 figs.

605.—Grzimek, B. Nasenbären auf der Robinsoninsel. *Zool. Gart., Lpz.* **20** 1953: 196–197.

606.—Grzimek, B. Tötung eines Menschen durch einen befreundeten Hund. *Z. Tierpsychol.* **10** 1954: 71–76 3 figs.

607.—Grzimek, B. Tötung von Menschen durch befreundete Hunde. II. *Z. Tierpsychol.* **11** 1954: 147–149.

608.—Guenther, E.-W. Neue Funde von Elefantenmolaren aus Schleswig-Holstein. *Schr. naturw. Ver. Schl.-Holst.* **27** 1954: 15–21 3 figs.

609.—Guenther, E. W. Die diluvialen Elefantenzähne aus dem Nord-Ostsee-Kanal. *Meyniana, Kiel* **2** 1954: 34–69 7 figs.

610.—Guest, N. J. and Leedal, G. P. Notes on the fauna of Kilimanjaro. *Tanganyika Notes and Records* **36** 1954: 43–49.

611.—Gunn, R. M. C. Cyclic changes in spermatogenesis in rams. *Rep. Aust. Ass. Advanc. Sci.* **28** [1952]: 89–101 12 figs.

Gunson, M. M. *see* Agar.

612.—Hafez, E. S. E. Oestrus and some related phenomena in the buffalo. *J. agric. Sci.* **44** 1954: 165–172 4 figs.

613.—Hafez, E. S. E. and Anwar, A. Normal haematological values in the buffalo. *Nature*, Lond. **174** 1954: 611–612.



- 614.—Hafez, E. S. E. and Shafsi, M. Sweating mechanism in the domestic buffalo. *Nature*, Lond. **174** 1954: 1181-1182 2 figs.
- 615.—Hafez, S. The placentome in the buffalo. *Acta zool.*, Stockh. **35** 1954: 177-191 7 figs.
- 616.—Hagen, B. Zur Kleinsäugerfauna Siziliens. *Bonn. zool. Beitr.* **5** 1954: 1-15 3 figs.
- 617.—Hager, H. Die Cytoarchitektonik des Bulbus olfactorius des Igels, *Erinaceus e. europaeus* Linné, 1758. *Säugetierk. Mitt.* **2** 1954: 8-15 6 figs.
- 618.—Halicka, J. Seasonal changes in the number of the chief cell types in the anterior pituitary in hedgehog. *Folia morph.*, Warsz. **2** 1951: 7-13. [Polish with English summary.]
- 619.—Hall, E. K. Further experiments on the intrinsic contractility of the embryonic rat heart. *Anat. Rec.* **118** 1954: 175-184 8 figs.
- 620.—Hall, E. R. A new subspecies of pocket mouse from Kansas. *Publ. Mus. nat. Hist. Univ. Kansas* **7** 1954: 587-590.
- 621.—Hall, E. R. and Bee, J. W. Occurrence of the harbor porpoise at Point Barrow, Alaska. *J. Mammal.* **35** 1954: 122-123.
- 622.—Hallander, Å. Hassehusen i Jönköpings län. *Fauna o. flora* **49** 1954: 97-102 3 figs.
- 623.—Halloran, A. F. and Blanchard, W. E. Carnivores of Yuma County, Arizona. *Amer. midl. Nat.* **51** 1954: 481-487 1 fig.
- 624.—Haltcnorth, Th. Erhaltungsdienst (Survival Service). *Säugetierk. Mitt.* **2** 1954: 35-36.
- 625.—Haltcnorth, Th. Erhaltungsdienst. *Säugetierk. Mitt.* **2** 1954: 128-130.
- 626.—Hamburgh, M. The embryology of trypan blue induced abnormalities in mice. *Anat. Rec.* **119** 1954: 409-427 24 figs.
- Hamilton, W. J. *see* Layne.
- 627.—Hammond, J. (ed.). Progress in the physiology of farm animals. I. pp. vii + 392. London (Butterworth's Sci. Pub.). [N.V.]
- 628.—Hancock, J. Monozygotic twins in cattle. *Advanc. Genet.* **6** 1954: 141-181.
- 629.—Handley, C. O. *Phenacomys* in Minnesota. *J. Mammal.* **35** 1954: 260.
- 630.—Hankó, B. L'origine de la population bovine en Hongrie. *Ann. Biol. hung.* **2** 1954: 215-226. [French summary.]
- Hannon, J. P. *see* Cook.
- Hansen, R. *see* Durrant.
- 631.—Hansen, R. M. The Belding ground squirrel north of the snake River in Idaho. *J. Mammal.* **35** 1954: 587.
- Hansen, R. M. *see* Durrant.
- 632.—Hanström, B. The neurohypophysis in the series of mammals. *Pubbl. Staz. zool. Napoli* **24** Suppl. 1954: 18-20.
- 633.—Hanström, B. The hypophysis in a wallaby, two tree-shrews, a marmoset, and an orang-utan. *Ark. Zool.* **6** 1954: 97-154 38 figs.
- 634.—Hanström, B. Further studies on the hypophysis and on the hypothalamic neurosecretory tracts in the monotremata. *Acta Univ. Lund.* (2) **50** 5 1954: 1-13 11 figs.
- 635.—Harder, W. Einige Beobachtungen an gefangenen Waldmäusen, *Apodemus sylvaticus* (Linné, 1758). Revierverhalten, gegenseitiges Erkennen, Kampfverhalten. *Säugetierk. Mitt.* **2** 1954: 72-74.
- 636.—Harder, W. Ein Meckelsches Divertikel bei einem Wildkaninchen, (*Oryctolagus cuniculi* L.). *Anat. Anz.* **100** 1954: 351-354 3 figs.
- 637.—Haring, F. Ziele und Wege der Tierzüchtung. *Z. Säugetierk.* **19** 1954: 117-151 1 pl. 3 figs.
- 638.—Harman, P. J. Genetically controlled demyelination in the mammalian central nervous system. *Ann. N.Y. Acad. Sci.* **58** 1954: 546-550 3 figs.
- 639.—Harker, K. W., Taylor, J. I. and Rollinson, D. H. L. Studies on the habits of Zebu cattle. I. Preliminary observations on grazing habits. *J. agric. Sci.* **44** 1954: 193-198 1 fig.
- Harper, P. V. *see* Lathrop.
- 640.—Harris, T. Experimental evidence of reproductive isolation between two subspecies of *Peromyscus maniculatus*. *Contr. Lab. Vertebr. Biol. Univ. Mich.* **70** 1954: 1-13.

641.—Harrison, J. L. The wing pouches of the naked bulldog bat. *Malay. Nat. J.* **9** 1954: 66–67.

642.—Harrison, J. L. The natural food of some rats and other mammals. *Bull. Raffles Mus.* **25** 1954: 157–165.

643.—Harrison, J. L. The moonlight effect on rat breeding. *Bull. Raffles Mus.* **25** 1954: 166–170.

Harrison, J. L. *see* Tweedie.

Harrison, J. L. *see* Van der Bijl.

644.—Harrison, R. G. The effect of ligation of the vasa efferentia on the rat testis, and the influence of unilateral orchidectomy on the effect of ischaemia on the contralateral testis. *Proc. Soc. Study Fertility No.* **5** 1953: 97–105 3 pls.

645.—Harrison, R. J. and Hyett, A. R. The development and growth of the placentomes in the fallow deer (*Dama dama* L.). *J. Anat., Lond.* **88** 1954: 338–355 2 pls. 6 figs.

646.—Harrison, R. J., Tomlinson, J. D. W. and Bernstein, L. The caval sphincter in *Phoca vitulina* L. *Nature, Lond.* **173** 1954: 86–87 1 fig.

647.—Hartman, L., Shorland, F. B. and McDonald, I. R. C. Occurrence of *trans*-acids in animal fats. *Nature, Lond.* **174** 1954: 185–186.

648.—Haugen, O. L. Longevity of the raccoon in the wild. *J. Mammal.* **35** 1954: 439.

649.—Hauschka, T. S. and Brown, E. Influence of maternal age on penetrance of "eyelids open" in newborn mice. *Ann. N.Y. Acad. Sci.* **57** 1954: 465–475 7 figs.

650.—Hawkins, T. B. A large tiger. *J. Bombay nat. Hist. Soc.* **52** 1954: 586.

651.—Hayden, J. and Kirby, P. Bats in Bishop's Stortford area. *Oryx* **2** 1954: 325–328.

652.—Hayman, R. W. A new West African squirrel. *Ann. Mag. nat. Hist. (12)* **7** 1954: 16.

653.—Hayman, R. W. Notes on some African bats mainly from the Belgian Congo. *Rev. Zool. Bot. Afr.* **50** 1954: 277–295 map.

654.—Hayman, R. W. Pangolins. *Zoo Life, Lond.* **9** 1954: 12–15 3 figs.

655.—Hayman, R. W. Mammals of Australasia. *Zoo Life, Lond.* **9** 1954: 44–50 6 figs.

656.—Hayman, R. W. Bears. *Zoo Life, Lond.* **9** 1954: 132–141 10 figs.

657.—Hazelwood, A. Mammalia (in Yorkshire Naturalists Union, Annual Report, 1953). *Naturalist No.* **848** 1954: 7.

Heck, H. *see* Tratz.

658.—Hediger, H. Operative Fremdkörper-Entfernung aus dem Magen eines Gorillas. *Zool. Gart., Lpz.* **20** 1953: 89–95 4 figs.

659.—Hediger, H. Are wild animals in captivity really wild? *Sci. Amer.* **190** 5 1954: 76–80 figs.

Hediger, H. *see* Block.

660.—Heerd, P. F. van and Sluiter, J. W. The results of bat banding in the Netherlands in 1954. *Natuurh. Maandbl.* **43** 1954: 85–88.

Heerd, P. V. van *see* Sluiter.

661.—Heim de Balsac, H. Un genre inedit et inattendu de mammifère (Insectivore Tenrecidae) d'Afrique Occidentale. *C.R. Acad. Sci. Paris* **239** 1954: 102–104 1 fig.

662.—Heizer, K. F. and Cook, S. F. Comments on the Piltdown remains. *Amer. Anthropol.* **56** 1954: 92–94.

663.—Heller, F. Neue Fundstellen altdiluvialer *Desmana*—Reste in Südwestdeutschland. *Neues Jb. Geol. Pal. Monatsh.* **10** 1954: 465–475 2 figs.

664.—Hemming, F. Report on the status of new names published in Oken, [1815–1816] "Lehrbuch der Naturgeschichte." *Bull. zool. Nom.* **9** 1954: 193–207.

665.—Hemming, F. Report on the question of the generic name to be used for the Virginia Deer of North America and the Fallow Deer of Europe. *Bull. zool. Nom.* **9** 1954: 293–297.

Hemmings, W. A. *see* Batty.

666.—Henderson, M. Foetal regression in rabbits: experimental studies of histolysis and phagocytosis. *Proc. roy. Soc.* **142B** 1954: 88–112 4 pls. 2 figs.

Hendrickson, G. O. *see* Cabalka.

Hendrickson, G. O. *see* Kline.

667.—Hendrickson, J. R. Breeding of the tree shrew. *Nature, Lond.* **174** 1954: 794-795.

Heptner, V. G. *see* Geptner.

668.—Herdman, H. F. P. Whale marking in the Antarctic. *Trident* **16** 1954: 21-23. *See* Coll. Repr. nat. Inst. Oceanogr. **2** 73 1954:.

669.—Herlant, M. Influence des oestrogènes chez le Murin (*Myotis myotis*) hibernant. *Bull. Acad. Belg. Cl. Sci.* (5) **40** 1954: 408-415 2 figs.

670.—Herold, W. Beobachtungen über den Witterungseinfluss auf den Massenwechsel der Feldmaus. *Z. Säugetierk.* **19** 1954: 86-107 7 figs.

671.—Herold, W. Über eine nicht gravid gewesene Ratte, die Mäuse säugt. *Z. Tierpsychol.* **11** 1954: 138-140 3 figs.

672.—Herre, W. Tierreste aus steinzeitlichen Fundstellen des Satrupholmer Moores in Schleswig-Holstein. *Schr. naturw. Ver. Schl.-Holst.* **24** 1949: 53-58.

673.—Herre, W. Wie sah der Auer-ochse aus? *Kosmos* **49** 11 1953: 504-507 3 figs.

674.—Hershkovitz, P. Mammals of Northern Colombia, preliminary report No. 7: Tapirs (genus *Tapirus*) with a systematic review of American species. *Proc. U.S. Nat. Mus.* **103** 1954: 465-496 4 figs.

675.—Hershkovitz, P. What the groundhog undergoes to make a holiday. *Bull. Chicago nat. Hist. Mus.* **25** 1954: 3-4.

676.—Herter, K., Ohm-Kettner, I. D. and others. Über die Aufzucht und das Verhalten zweier Baumarder (*Martes martes* L.). *Z. Tierpsychol.* **11** 1954: 113-137 19 figs.

677.—Hesketh, G. E. Lesser horse-shoe bat in Shropshire. *Oryx* **2** 1954: 330.

678.—Hesketh, G. E. Notes on Denbighshire bats. Part II. *Proc. Chester Soc. nat. Sci.* [5] 1954: 100-108 3 pls.

679.—Hess, A. Reactions of mammalian fetal tissues to injury. I. Surgical technique. *Anat. Rec.* **119** 1954: 35-51.

680.—Hess, A. Reactions of mammalian fetal tissues to injury. II. Skin. *Anat. Rec.* **119** 1954: 435-447 10 figs.

681.—Hess, A. Reactions of mammalian fetal tissues to injury. III. Skeletal muscle. *Anat. Rec.* **120** 1954: 583-597 15 figs.

682.—Hess, L. An anteater named Teddy. *Nat. Hist., N.Y.* **63** 1954: 8-15 14 figs.

683.—Hesse, P. R. The identification of the spoor and dung of East African Mammals. *J. E. Afr. Ug. nat. Hist. Soc.* **22** 1954: 107-110 4 pls.

684.—Hewer, H. R. and Neal, E. G. Filming badgers at night. *Discovery* **15** 1954: 121-124 4 figs.

685.—Hewitt, W. A histochemical study of fat absorption in the small intestine of the rat. *Quart. J. micr. Sci.* **95** 1954: 153-157 1 pl.

686.—Hibbard, C. W. A new Pliocene vertebrate fauna from Oklahoma. *Pap. Mich. Acad. Sci.* **39** 1954: 339-359 5 figs.

687.—Hibbard, C. W. A new *Synaptomys*, an addition to the Borchers interglacial (Yarmouth?) fauna. *J. Mammal.* **35** 1954: 249-252 1 fig.

688.—Hibbard, C. W. Second contribution to the Rexroad fauna. *Trans. Kansas Acad. Sci.* **57** 1954: 221-237 3 figs.

Hibiya, T. *see* Nishiwaki.

Hild, W. *see* Zetler.

689.—Hildebrand, M. Comparative morphology of the body skeleton in recent Canidae. *Univ. Calif. Publ. zool.* **52** 1954: 399-470 4 pls. 30 figs.

690.—Hildebrand, M. Incisor tooth wear in the sea otter. *J. Mammal.* **35** 1954: 595.

Hill, J. E. *see* Laurie.

691.—Hill, W. C. O. Appendicitis in gibbons. *Proc. zool. Soc. Lond.* **124** 1954: 13-16 2 pls.

692.—Hill, W. C. O. Ontogenetic changes in the mesogastric viscera of the Colobidae. *Proc. zool. Soc. Lond.* **124** 1954: 163-183 3 pls. 10 figs.

693.—Hill, W. C. O. Report of the Society's Prosector for the year 1953. *Proc. zool. Soc. Lond.* **124** 1954: 303-311.

- 694.—Hill, W. C. O. and Davies, D. V. The reproductive organs in "Hapalemur" and "Lepilemur." Proc. roy. Soc. Edinb. **65B** 1954: 251-270 4 pls. 4 figs.
- 695.—Hill, W. C. O. and Rewell, R. E. The caecum of monotremes and marsupials. Trans. zool. Soc. Lond. **28** 1954: 185-240 8 pls. 3 figs.
- 696.—Hill, W. C. O., Barker, W., Stockley, C. H., Pitman, C. R. S., Offermann, P. B., Rushby, G. G., and Gowers, W. The elephant in East Central Africa. A monograph. London (Rowland Ward Ltd.) 1953: 1-150 1 pl.
- Hill, W. C. O. *see* Davies.
- 697.—Hilzheimer, M. Zur Geschichte der märkischen Säugetierwelt. Z. Säugetierk. **18** 1953: 182-187.
- 698.—Hindle, E. The whaling industry. J. roy. Soc. Arts **100** 1952: 132-146 7 figs.
- 699.—Hirasaka, K. Basking habit of the Japanese bear. J. Mammal. **35** 1954: 128.
- 700.—Hitchcock, H. B. Felled tree kills beaver (*Castor canadensis*). J. Mammal. **35** 1954: 452.
- 701.—H., J. J. Report on mammals. Rep. Bryanston Sch. nat. Hist. Soc. 1953 [1954]: 4-5.
- 702.—Höbel, E. Vergleichende und experimentelle Untersuchungen über den Aschengehalt der Speicheldrüsen. Z. mikr. anat. Forsch. **60** 1954: 33-64 18 figs.
- 703.—Hodge, L. A word for the Dingo. Vict. Nat., Melb. **70** 1954: 207.
- 704.—Hoecker, G., Counce, S. and Smith, P. The antigens determined by the H-2 locus: a rhesus-like system in the mouse. Proc. Nat. Acad. Sci. Wash. **40** 1954: 1040-1051.
- 705.—Hoehne, L. and Rosenfeld, G. Estados de hematologia comparada. II. Dados hematologicas do cachorro do mato, *Cercopithecus thomasi azarae* (Wied, 1826). Mem. Inst. Butantan **25** 1954: 55-65.
- Hoehne, L. *see* Rosenfeld.
- 706.—Hofer, H. Über Gehirn und Schädel von *Megaladapis edwardsi* G. Grandidier (Lemuroidea), nebst Bemerkungen über einige aiorhynche Säuger-schädel und die Stirnhöhlenfrage. Z. wiss. Zool. **157** 1954: 220-284 6 figs.
- 707.—Hoffman, R. A. and Kirkpatrick, C. M. Red fox weights and reproduction in Tippecanoe County, Indiana. J. Mammal. **35** 1954: 504-509.
- 708.—Hoffman, A. Répertoire analytique des espèces animales nuisibles aux cultures en France (Métropole et départements d'Outre-Mer) ayant présenté d'intéressantes particularités en 1952. Ann. Epiphyt. **4** 1953: 423-433.
- 709.—Hoffmann, G. Über die Lunge des Bergkänguruhs (*Macropus robustus* Gould). Zool. Gart., Lpz. **20** 1953: 159-163 3 figs.
- Hoffmann, G. *see* Schwarze.
- 710.—Hoffmeister, D. F. Zoogeographical relationships of the mammals of Illinois. Trans. Ill. Acad. Sci. **46** 1953: 212-215 1 fig.
- 711.—Hoffmeister, D. F. Distribution of some Illinois mammals. Nat. Hist. Misc. No. 128 1954: 1-4.
- 712.—Hoffmeister, D. F. Observations on mammals in Southeastern Arizona. Nat. Hist. Misc. No. 129 1954: 1.
- 713.—Hoffmeister, D. F. and Goodpaster, W. W. The mammals of the Huachuca Mountains, Southeastern Arizona. Illinois biol. Monogr. **24** 1 1954: 1-152 27 figs.
- Hoffmeister, D. F. *see* Goodpaster.
- Hoffmeister, D. F. *see* Van Gelder.
- 714.—Hoffstetter, R. Phylogénie des Édentés Xénarthres. Bull. Mus. Hist. nat., Paris **26** (2) 1954: 433-438 1 fig.
- 715.—Hoffstetter, R. Les Gravigrades cuirassés du Déséadien de Patagonie (note préliminaire). Mammalia, Paris **18** 1954: 159-169 3 figs.
- Hoffstetter, R. *see* Arambourg.
- Hoiberg, A. J. *see* Sealander.
- 716.—Hoier, R. Le Léopard dans le Parc National Albert. Zooleo No. 28 1954: 471-474 figs.
- 717.—Holabird, C. and others. The Brookfield Zoo, 1934-1954, Brookfield Ill. (Chicago Zool. Soc.). 1954 pp. 79 frontis. text illus.
- 718.—Holdenried, R. A new live-catch rodent trap and comparison with two other traps. J. Mammal. **35** 1954: 267-268.



719.—Holdsworth, M. Effect of goats on Great Island, Three Kings: The permanent Quadrats resurveyed. Rec. Auckland [N.Z.] Inst. 4 1951: 113-121 12 pls.

Hollyfield, J. P. *see* Hopwood.

720.—Homma, K. Metabolism of testis. Bull. Naniwa Univ. 2B 1952: 7-9

721.—Honjin, R. On the ganglia and nerves of the lower respiratory tract of the mouse. J. Morph. 95 1954: 263-287 2 figs.

722.—Hoogerwerf, A. Nature protection in Indonesia. Oryx 2 1954: 221-227 2 figs.

Hoogstraal, H. *see* Wassif.

723.—Hooijer, D. A. Pleistocene vertebrates from Celebes. VIII. Dentition and skeleton of *Celebochoerus heekereni* Hooijer. Zool. Verh. No. 24 1954: 1-46 6 pls.

724.—Hooijer, D. A. A pygmy *Stegodon* from the middle Pleistocene of Eastern Java. Zool. Meded., Leiden 33 1954: 91-102 1 pl.

725.—Hooijer, D. A. Pleistocene vertebrates from Celebes. XI. Molars and a tusked mandible of *Archidiskodon celebensis* Hooijer. Zool. Meded., Leiden 33 1954: 103-120 2 pls.

726.—Hooper, E. T. A synopsis of the Cricetine rodent genus *Nelsonia*. Occ. Pap. Mus. Zool. Univ. Mich. 558 1954: 1-12 1 fig.

727.—Hooper, J. H. D. A study of cave-dwelling bats in Devon. Bull. Mamm. Soc. Brit. Is. 2 1954: 6-13.

728.—Hoover, R. L. Seven fetuses in western fox squirrel (*Sciurus niger rufiventer*). J. Mammal. 35 1954: 447-448.

729.—Hopwood, A. T. Notes on the recent and fossil mammalian faunas of Africa. Proc. Linn. Soc. Lond. 165 1954: 46-49.

730.—Hopwood, A. T. and Hollyfield, J. P. An annotated bibliography of the fossil mammals of Africa (1742-1950). Fossil Mammals of Africa, British Museum (Natural History) 8 1954: 1-194.

731.—Hopwood, A. T. and Leperonne, J. Présence de formations d'âge miocène inférieur dans le fossé tectonique du Lac Albert et de la Basse Semliki (Congo belge). Ann. Soc. Geol. Belg. 77 1953: 83-113 2 pls. 6 figs.

732.—Horner, B. E. Arboreal adaptations of *Peromyscus* with special reference to use of the tail. Contr. Lab. Vertebr. Biol. Univ. Mich. No. 61 1954: 1-84 7 pls.

733.—Hosley, N. W. Fluctuations of the United States big game population during the last decade. Proc. 7th Pacif. sci. Congr. 4 1953: 620-626.

734.—House, E. L. A comparison of weight changes in pregnant and non-pregnant female rats. Anat. Rec. 118 1954: 737-744 6 figs.

735.—Howard, P. A.N.A.R.E. bird banding and seal marking. Vict. Nat., Melb. 71 1954: 73-82 2 figs.

736.—Howell, J. C. Populations and home ranges of small mammals on an overgrown field. J. Mammal. 35 1954: 177-186 2 figs.

737.—Hrachovec, J. Sur la variation de composition du muscle et du foie au cours du développement du Lapin. C.R. Acad. Sci. Paris 239 1954: 306-308.

738.—Hubbard, W. D. Wild dog of Africa. Nat. Hist., N.Y. 63 1954: 454-455 figs.

739.—Hubrecht Laboratory. Concise catalogue of the Central Embryological Collection of the Hubrecht Laboratory, Utrecht, 1953: pp. 44. [Mammals pp. 26-36.]

Hudson, J. R. *see* Ritchie.

740.—Huey, L. M. A new form of *Perognathus formosus* from Baja California, Mexico. Trans. San Diego Soc. nat. Hist. 12 1954: 1-2.

741.—Huey, L. M. Second record of *Tadarida molossa* from San Diego, California. J. Mammal. 35 1954: 435-436.

742.—Huey, L. M. *Choeronycteris mexicana* from southern California and Baja California, Mexico. J. Mammal. 35 1954: 436-437.

743.—Hughes, A. R. Habits of hyaenas. S. Afr. J. Sci. 51 1954: 156-158 2 figs.

744.—Hughes, A. R. Hyaenas versus Australopithecines as agents of bone accumulation. Amer. J. Phys. Anthropol. 12 1954: 467-486 7 figs.

745.—Humber, R. D. Pine martens in the fells. Field 204 1954: 345 2 figs.

- 746.—Hunter, G. L., Adams, C. E. and Rowson, L. E. Successful interbreed transfer of ova in sheep. *Nature*, Lond. **174** 1954: 890.
- 747.—Hurrell, H. G. Fourth report on mammals. *Rep. Devon. Ass. Adv. Sci.* **85** 1953: 226–228.
- 748.—Hurrell, H. G. Fifth report on mammals. *Rep. Devon. Ass. Adv. Sci.* **86** 1954: 302–303.
- 749.—Hürzeler, J. Contribution à l'odontologie et à la phylogénèse du genre *Phopithecus* Gervais. *Ann. Paleont.* **40** 1954: 5–63 41 figs.
- 750.—Husson, A.-M. On a melanistic specimen of the Long-tailed field mouse *Apodemus sylvaticus sylvaticus* (L.). *Mammalia*, Paris **18** 1954: 329–330.
- 751.—Husson, A. M. A preliminary note on the bats hibernating in the casemates of the town of Luxembourg. *Arch. Inst. Luxemb. Sci. nat. phys. math.* N.S. **21** 1954: 65–70 3 figs.
- 752.—Husson, A. M. On *Vampyroides caracciola* (Thomas) and some other bats from the island of Tobago (British West Indies). *Zool. Meded. Leiden* **33** 1954: 63–67.
- 753.—Husson, A. M. and Sluys, G. K. van der. De eerste vondst van *Marmota marmota primigenia* (Kaup 1839), de alpenmarmot, in het laat-Pleistoceen van Nederland. *Natuurh. Maandbl.* **43** 1954: 51–64 1 pl. [English summary.]
- 754.—Hutchinson, G. E. and Ripley, S. D. Gene dispersal and the ethology of the Rhinocerotidae. *Evolution* **8** 1954: 178–179.
- 755.—Hutchison, H. G. and Mabon, R. M. Studies on the environmental physiology of cattle in Tanganyika. I. Preliminary observations on the seasonal diurnal variations in the rectal temperature of local zebu cattle. *J. agric. Sci.* **44** 1954: 121–128 2 figs.
- Hyett, A. R. *see* Harrison.
- 756.—Illingworth, F. Ox of the Arctic. *Ctry. Life*, Lond. **115** 1954: 514–515 2 figs.
- 757.—Imaizumi, Y. Taxonomic studies on Japanese *Myotis* with descriptions of three new forms (Mammalia: Chiroptera). *Bull. nat. Sci. Mus.*, Tokyo N.S. **1** 1954: 40–58 4 pls. 2 figs.
- 758.—Imaizumi, Y. New species and subspecies of *Sorex* from Japan (Mammalia: Insectivora). *Bull. nat. Sci. Mus.*, Tokyo N.S. **1** 1954: 94–102 2 pls. 13 figs.
- 759.—Ingles, L. G. The little ploughman. *Nat. Hist.*, N.Y. **63** 3 1954: 134–139 5 figs.
- 760.—Inukai, T. The damage of the hare on the reforestation as observed at the Izu Peninsula, Shizuoka Prefecture. *Jap. J. appl. Zool.* **19** 1954: 83–85 4 figs. [Japanese with English summary.]
- 761.—Irwin, J. W. and others. Microscopical observations of the pulmonary arterioles, capillaries, and venules of living guinea pigs and rabbits. *Anat. Rec.* **119** 1954: 391–407 9 figs.
- 762.—Ishida, K. Morphology and cytochemistry of ovaries of domestic animals. *Tohoku J. agric. Res.* **4** 1954: 197–210 1 pl.
- 763.—[Ismagilov, M. I.] [The ecology of dzeren in Barse-Kelmes Island.] *Bull. Soc. Nat. Moscow biol.* **59** (6) 1954: 3–9 3 figs. [In Russian.]
- 764.—Issel, W. Wiederfundzahlen beringerter Fledermäuse. *Säugetierk. Mitt.* **2** 1954: 127.
- 765.—Isshiki, O. On the *Globidium* in the mucous membrane of small intestine of a goat (a case hitherto unrecorded in Japan). *Sci. Rep. Fac. Agric. Naniwa Univ.* No. **1** 1950: 153–156 2 figs.
- 766.—Ivy, R. H. Snaring of game by natives. *Afr. Wild Life* **8** 1954: 283–287 3 figs.
- 767.—Izbirak, R. and Yalçınlar, I. Les vertébrés du Miocène Supérieur au Nord de Kayeri (Turquie). *Bull. geol. Soc. Turk.* **3** 1951: 153–157 1 geol. map. [Fr. résumé.]
- Iziri, S. *see* Yabe.
- 768.—Jackson, H. H. T. Wolverine (*Gulo luscus*) specimens from Wisconsin. *J. Mammal.* **35** 1954: 254.
- Jacob, F. H. *see* Church.
- 769.—Jaczewski, Z. The effect of changes in length of daylight on the growth of antlers in the deer (*Cervus elaphus* L.). *Fol. Biol. Kraków* **2** 1954: 133–143 6 figs. [Polish with English summary.]

- 770.—Jaeger, P. Les aspects actuels du problème de Chéiroptérogamie. Bull. Inst. franc. Afr. Noire **16A** 1954: 796–821 13 figs.
- 771.—Jaffe, J. J. Diurnal mitotic periodicity in regenerating rat liver. Anat. Rec. **120** 1954: 935–954 2 figs.
- 772.—Jahn, G. Bergersen, B. and Vangstein, E. Int. Whal. Statist. **31** 1954: 1–71.
- 773.—Jahn, G., Bergersen, B. and Vangstein, E. Int. Whal. Statist. **32** 1954: 1–86.
- 774.—Jany, E. Die Schwimnfähigkeit von Mäusen (Muridae). Säugetierk. Mitt. **2** 1954: 75–78 3 figs.
- 775.—Jennov, J. G. En Undersogelse af moskusoksens Vilkaar i Nordøstgrønland er nu mere paakrævet end nogensinde. Nat. Verd. Kbh. **37** 1953: 282–285.
- 776.—J. C. Whaling activity on the Chilean coast. Norsk Hvalfangsttid. **43** 1954: 267–272 3 figs.
- 777.—Jirsik, J. Tchou stepni (plavy), *Mustela (Putorius) eversmanni* Lesson v severozapadnich Cechach. Acta Mus. Nation. Prag **121** 1952: 59–63 3 figs.
- 778.—Jobaert, A. J. Le lion. Zooleo No. 25 1954: 311–324 col. pl. figs.
- 779.—Jobaert, A. J. Essai de contribution à la zoogéographique du Congo Belge. Les mammifères de la Province du Kasai à l'exception des Primates, des Chiroptères, des Rongeurs et leur repartition. Zooleo No. 28 1954: 475–481 figs.
- 780.—Jobaert, A. J. L'hippopotame. Zooleo No. 29 1954: 525–537 figs.
- 781.—Johnsen, P. Birds and mammals of Peary Land in North Greenland. including notes from Northeast Greenland. Medd. Grønland **128** 6 1953: 1–140 14 figs. [Mammals: 91–132.]
- 782.—Johnson, D. H. A new marsupial of the genus *Antechinus* from northern Australia. Proc. Biol. Soc. Wash. **67** 1954: 77–80.
- Johnson, D. H. see Miller.
- 783.—Johnson, M. L. Fall and winter record of silver-haired bat for Washington State. Murrelet **31** 1953: 32.
- 784.—Johnson, M. L. and Couch, L. K. Determination of the abundance of cougar. J. Mammal. **35** 1954: 255–256.
- 785.—Johnson, N. K. New mammal records for Nevada. J. Mammal. **35** 1954: 577–578.
- 786.—Johnston, H. L. and Oliff, W. D. The oestrous cycle of female *Rattus (Mastomys) natalensis* (Smith) as observed in the laboratory. Proc. zool. Soc. Lond. **124** 1954: 605–613.
- 787.—Johnstone, G. Deer from Asia. Field. **203** 1954: 977.
- Jones, A. D. see Serventy.
- 788.—Jones, J. K. Distribution of some Nebraskan mammals. Publ. Mus. Nat. Hist. Univ. Kansas **7** 1954: 479–487.
- 789.—Jones, J. K. and Findley, J. S. Geographic distribution of the short-tailed shrew, *Blarina brevicauda*, in the Great Plains. Trans. Kansas Acad. Sci. **57** 1954: 208–211 1 fig.
- 790.—Jones, J. K. and Loomis, R. B. Records of the short tailed shrew and least shrew from Colorado. J. Mammal. **35** 1954: 110.
- Jones, J. K. see Findley.
- 791.—Jones, J. L. The Rabbit: for and against. Ctry Life, Lond. **116** 1954: 486–487 4 figs.
- 792.—Jorg, E. Die Schichtenfolge der Fossilfundstelle Höwenegg (Hegan) (Pontische Mergel und Tuffite der Oberen Süßwassermolasse). Jb. Mitt. Oberrh. Geol. Ver. **35** 1953: 67–87 2 pls. 1 fig.
- 793.—Joseph, J. Nuclear population changes in degenerating posterior columns of rabbit's spinal cord. Acta anat. **21** 1954: 356–365 1 pl.
- 794.—Joubert, D. M. Breeding for beef in tropical and sub-tropical climates with special reference to the continent of Africa. Colon. Pl. Anim. Prod. **4** 1954: 1–13 4 pls. 4 figs.
- 795.—Jusko, J. Sexual dimorphism on bison's (*Bison bonasus*) skeleton. Folia morph., Warszawa **4** 1953: 1–30. [Polish with English rés.]
- 796.—Kadambi, K. Intelligence of the Indian elephant. J. Bombay nat. Hist. Soc. **52** 1954: 590–594.
- 797.—Kahmann, H. and E. La musaraigne de Corse. Mammalia, Paris **18** 1954: 129–158 6 figs.

798.—Kaiser, H. E. Eine Schädel-anomalie eines diluvialen *Elephas primigenius*. Neues Jb. Geol. Pal. Monatsh. 11 1954: 509-511 2 figs.

799.—Kaiser, H. E. Zwei Halswirbel eines tertiären Cerviden, *Amphitragulus* mit eigenartigen Deformierungen. Anat. Anz. 101 1954: 131-132 6 figs.

800.—[Kalabukhov, N. I. and Pryakhin, V. A.] [Some ecological and physiological characteristics in *Meriones tamarsicus* Pall. and *Pallasiomys meridianus* Pall.] Zool. Zh., Moscow 33 1954: 889-903 5 diagms. [In Russian.]

801.—Kalela, O. Changes in the geographic distribution of Finnish birds and mammals in relation to recent changes in climate. Fennia, Helsinki 75 1952: 38-52 3 figs.

802.—Kalela, O. Über den Revierbesitz bei Vögeln und Säugetieren als populationsökologischer Faktor. Ann. zool. Soc. zool.-bot. Vanamo 16 2 1954: 1-48.

803.—Kalin, J. Eine neue Untersuchungsmethode zur morphologie des Primatenbeckens. Verh. schweiz. naturf. Ges. 133 1953: 104-108.

804.—Kalter, H. The inheritance of susceptibility to the teratogenic action of cortisone in mice. Genetics 39 1954: 185-196.

805.—Kanagasuntheram, R. Observations on the anatomy of the hoolock gibbon—contd. Ceylon J. Sci. 56 1954: 69-122 17 figs.

806.—Kano, K. Mitotic features of monocytes occurring in the peritoneal fluid of rats. J. Fac. Sci. Hokkaido Univ. Zool. 11 1953: 495-501 13 figs.

Karaerova, G. P. see Rall.

807.—[Karlov, N. N.] [Occurrence of remains of Quaternary mammals, found near Dnepopetrovsk]. Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.S.S.R.) 18 1953: 98-99 1 fig.

808.—Karolewicz, L. The brown fat tissue of a hedgehog. Folia morph. Warszawa 4 1953: 49-58 6 figs. [Polish with English rés.]

809.—Katarki, H. V. and Kulkarny, H. L. Control of field rats and bandicoots. Poona agric. Coll. Mag. 41 1950: 49-51.

810.—Kayser, C. La défense d'énergie des mammifères hibernants pendant toute la durée de l'hibernation. Recherches faites sur le spermophile (*Citellus citellus*). Arch. Sci. physiol. 6 1952: 193-212 8 figs.

811.—Kean, R. I. and Pracy, L. Effects of the Australian opossum (*Trichonurus vulpecula*) Kerr on indigenous vegetation in New Zealand. Proc. 7th Pacif. sci. Congr. 4 1953: 696-705.

812.—Keilbach, R. Vergleichend-anatomische Studien über die Säugernase mit besonderer Berücksichtigung des Knorpelskelettes. Wiss. Z. Univ. Greifswald. Math. nat. R. 3 1954: 201-244 87 figs.

813.—Keimer, L. Jardins Zoologiques d'Egypte. Cahiers d'Hist. Egypt. Ser. 6 2 1954: 80-159 2 pls. 35 figs.

814.—Kelley, D. R. and Wood, A. E. The Eocene mammals from the Lysite member, Wind River formation of Wyoming. J. Paleont. 28 1954: 337-366 15 figs.

815.—Kemna, A. Über eine Ruckkreuzung eines Löwen-Tiger-Bastards mit einen Löwen in der zweiten Generation und tierärztliche Beobachtungen bei der Aufzucht der empfindlichen Jungtiere. Zool. Gart., Lpz. 20 1953: 122-126 6 figs.

816.—Kennerly, T. E., Jr. Local differentiation in the pocket gopher (*Geomys personatus*) in Southern Texas. Texas J. Sci. 6 1954: 297-329 16 figs.

817.—Kenyon, K. W., Scheffer, V. B. and Chapman, D. G. A population study of the Alaska fur-seal herd. Spec. sci. Rep. U.S. Fish Wildl. Serv. Wildl. No. 12 1954: 1-77 15 figs.

818.—Keys, C. E. Phyletic relationships among some rodents with special consideration of *Sigmodon* based on embryological data. Trans. Kentucky Acad. Sci. 15 1-2 1954: 1-11.

819.—Khajuria, H. Taxonomic studies on some Indian Chiroptera. Rec. Indian Mus. 50 1953: 113-128.

820.—Khajuria, H. Catalogue of mammals in Zoological Survey of India. I. Primates: Hominoidea. Rec. Indian Mus. 50 1953: 129-145.



- 821.—**Khajuria, H.** Taxonomic status of the Celebes ashy-black monkey—a remarkable case of convergence. *Rec. Indian Mus.* **50** 1953: 301–305 1 pl.
- 822.—**Khalil, F. and Abdel-Messeih, G.** Water content of tissues of some desert reptiles and mammals. *J. exp. Zool.* **125** 1954: 407–414 1 fig.
- Khan, A. W.** *see* Latif.
- 823.—[**Khaverson, Y. I.**] [Wild one-humped camel from the deposits of lake Sevan (Armenia)]. *C.R. Acad. Sci. URSS n.s.* **98** 1954: 475–478 1 pl. [In Russian.]
- 824.—**Kilham, L.** Cow-pasture nests of *Cryptotis parva parva*. *J. Mammal.* **35** 1954: 252.
- 825.—**Kilham, L.** Territorial behaviour of red squirrel. *J. Mammal.* **35** 1954: 252–253.
- Kimura, S.** *see* Nishiwaki.
- 826.—**King, J. A.** Closed social groups among domestic dogs. *Proc. Amer. phil. Soc.* **98** 1954: 327–336 4 figs.
- 827.—**King, J. E.** Mammal bones from Khirokitia and Erimi. Appendix III from Khirokitia (P. Dikaos). Oxford Univ. Press 1954: 431–437 1 fig.
- 828.—**King, J. E.** The Otariid seals of the Pacific coast of America. *Bull. Brit. Mus. (Nat. Hist.) Zool.* **2** 1954: 309–337 2 pls. 3 figs.
- King, J. E.** *see* Fraser.
- King, J. W. B.** *see* Falconer.
- 829.—**Kirby, A.** Observations on the blood supply of the bull testis. *Brit. Vet. J.* **109** 1953: 464–472 4 pls.
- Kirkby, P.** *see* Hayden.
- Kirkpatrick, C. M.** *see* Hoffman.
- 830.—**Kirkpatrick, K. M.** Aboriginal methods employed in killing and capturing game. *J. Bombay nat. Hist. Soc.* **52** 1954: 285–300 6 figs.
- 831.—**Kitchener, H. J.** A naked bulldog bat. *Malay. Nat. J.* **8** 1954: 165–166 1 fig.
- 832.—**Kitchener, H. J.** A further note on the naked bulldog bat. *Malay. Nat. J.* **9** 1954: 26–28.
- 833.—**Kitchener, H. J.** A freak antler. *Malay. Nat. J.* **9** 1954: 33 2 figs.
- 834.—**Kitchener, H. J.** Hair. *Malay. Nat. J.* **9** 1954: 57–61 2 pls.
- 835.—**Kitchener, H. J.** Malformation in antlers of the Malayan Sambar. *J. Bombay nat. Hist. Soc.* **52** 1954: 588–589 1 fig.
- 836.—**Kitchener, H. J.** A mystery solved. *Field* **203** 1954: 314.
- Kitts, D. B.** *see* Edinger.
- Kiyanova, V. S.** *see* Rall.
- 837.—**Kladetzky, J.** Mitteilung über den Tod eines Elefanten im Zoologischen Garten Köln. *Zool. Gart., Lpz.* **20** 1953: 198.
- 838.—**Kladetzky, J.** Über Morphologie und Lage der Löwen- und Giraffenhypophyse. *Anat. Anz.* **100** 1954: 202–216 9 figs.
- 839.—**Klapperstuck, J.** Der Sumpfbiber (Nutria). Neue Brehm-Bucherei, Wittenberg Lutherstadt 1954: 55 28 figs.
- 840.—**Klatt, B.** Das Säugetiergrosshirn als zoologisches Problem. *Zool. Anz.* **153** 1954: 1–15 4 figs.
- 841.—**Klemmer, K.** Hermelin und Wiesel. *Natur u. Volk* **84** 1954: 62–67 3 figs.
- 842.—**Klemmer, K.** Fledermäuse und ihre Wanderungen im Rhein-Main-Gebiet. *Natur u. Volk* **84** 1954: 413–421 7 figs.
- 843.—**Klemmer, K. and Krampitz, H. E.** Zur Kenntnis der Säugetierfauna Siziliens. *Senckenbergiana Biol.* **35** 1954: 121–135 2 figs.
- 844.—**Kline, P. D. and Hendrickson, G. O.** Autumnal decimation of Mearns cottontail, Decatur County, Iowa, 1952. *Proc. Iowa Acad. Sci.* **61** 1954: 524–527.
- 845.—**Kluge, R.** Über Vorkommen und Frequenz überzähliger Zähne bei den anthropoiden Affen mit besonderer Berücksichtigung der “Distomolaren” im Sinne Bolks. *Wiss. Z. Univ. Greifswald. Math.-Nat. R.* **3** 1954: 533–556 figs.
- 846.—**Knepp, T. H.** A two-headed pony fetus. *Proc. Pa. Acad. Sci.* **28** 1954: 303–304 1 fig.
- 847.—**Knigg, K. M.** The effect of acute starvation on the adrenal cortex of the hamster. *Anat. Rec.* **120** 1954: 555–582 20 figs.
- 848.—**Knight, M.** Dormice and their diet. *Oryx* **2** 1954: 330–331.

- 849.—Knoop, I. Untersuchungen über das Farben- und Formensehen bei Goldhamster (Mesocricetus auratus Waterh.), mit Hilfe der Dressurmethode. Zool. Beitr., Berl. N.F. 1 1954: 219-239 7 figs.
- 850.—[Knorre, E. P.] [Catching, breeding and training of elks.] Nasimovich, A.A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 191-200. [In Russian.]
- 851.—Koby, F.-E. Lésions pathologiques aux sinus frontaux d'un ours des cavernes. Eclog. Geol. Helvet. 46 1953 (1954): 295-297 1 fig.
- 852.—Koch, L. L. de The intra-glomerular tissues of the carotid body. Acta anat. 21 1954: 101-116.
- 853.—Koegel, A. Vom Öffnen von Türen durch Tiere. Z. Tierpsychol. 11 1954: 495-496.
- 854.—Koenigswald, G. H. R. von. The Australopithecinae and Pithecanthropus. III. Proc. K. Akad. Amst. 57B 1954: 85-91 1 fig.
- 855.—Koenigswald, G. H. R. von. Status of Szechuanopithecus from the Pleistocene of China. Nature, Lond. 173 1954: 643-644.
- 856.—Koenigswald, G. H. R. von. Pithecanthropus, Meganthropus and the Australopithecinae. Nature, Lond. 173 1954: 795-797.
- 857.—Kolb, A. Biologische Beobachtungen an Fledermäusen. Säugetierk. Mitt. 2 1954: 15-25 10 figs.
- Kolesnikov, I. M. see Yakovlev.
- 858.—Kolk, H. H. v. d. Hoe de rattenbestrijding in de noordoostpolder verliep. Rat en Muis 1 1954: 12-13.
- 859.—Korn, W. Zur systematischen Stellung von Paidopithecus rhenanus Pohlig. Naturwissenschaften 41 1954: 192-193.
- 860.—[Korzhuev, R. A. and Goldfarb, N. L.] [Some ecologic-physiological features of blood in white and common hare and in domestic rabbit.] Zool. Zh., Moscow 33 1954: 1384-1389. [In Russian.]
- 861.—[Kostyan, E. Y.] [New data on reproduction in polar bears.] Zool. Zh., Moscow 33 1954: 207-215 3 figs. [In Russian.]
- 862.—Kough, R. H. Attack on a human being by a rabid insectivorous bat. J. Amer. med. Ass. 155 1954: 441-446.
- 863.—[Kozhevnikov, V. V.] [Twelve winter seasons of wolf control in the region of Mordov Game Reserve.] Nasimovich, A.A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 136-139 fig. [In Russian.]
- 864.—[Kozlov, V. V.] [Some results in wolf control in state game reserves.] Nasimovich, A.A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 105-116 4 figs. [In Russian.]
- 865.—[Kozlov, V. V.] [Influence of game protection on mammals of the Meshehorsk lowland.] Zool. Zh., Moscow 33 1954: 925-943 3 figs. [In Russian.]
- 866.—Kramer, G. Über relatives Wachstum bei Bartenwalen. Zool. Anz. 152 1954: 58-64 5 figs.
- Krampitz, H. E. see Klemmer.
- 867.—[Krasovski, V. P.] [Artificial shelters for musk-rats and beavers in flood period.] Nasimovich, A.A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 65-69 2 figs. [In Russian.]
- 868.—[Krasovski, V. P.] [Observations on breeding of desman in captivity.] Zool. Zh., Moscow 33 1954: 180-183 2 figs. [In Russian.]
- 869.—Kratohvil, J. and Rosicky, B. Eine neue Rasse von Sorex alpinus aus CSR. Mém. Soc. zool. tchéosl. 16 1952: 51-65 2 figs. [Czech with German summary.]
- Krause, N. P. see Stellar.
- 870.—Kretzoi, M. Quaternary geology and the vertebrate fauna. Acta Geol. Hung. 2 1953: 67-77.
- 871.—Kretzoi, M. Ostrich and camel remains from the central Danube basin. Acta Geol. Hung. 2 1954: 231-241 3 pls.
- 872.—Kretzoi, M. Le plus ancien vestige fossile de mammifère en Hongrie. Földt. Közlon. 83 1953: 273-277. [Hungarian with French summary.]
- 873.—Kretzoi, M. Marmot—remains from Debrecen. Földt. Közlon. 84 1954: 75-77. [Hungarian with English summary.]

- 874.—[Krilova, K. T., Shilova, E. S. and Shilov, M. N.] [Peculiarities in ecology of *Rhombomys opimus* (Licht.) in the winter period and in the conditions of Northern Prearal.] Bull. Soc. Nat. Moscow Biol. 59 1954: 3-14 6 figs. [In Russian.]
- 875.—[Kritzov, A. I.] [Diurnal activity of voles and lemmings in northern Kazakhstan.] Zool. Zh., Moscow 33 1954: 197-206 4 figs. [In Russian.]
- 876.—Krog, J. Storing of food items in the winter nest of the Alaskan ground squirrel, *Citellus undulatus*. J. Mammal. 35 1954: 586.
- 877.—Krott, P. Das Wiederfinden eines auf einem Transport entsprungenen Vielfrasses. Z. Tierpsychol. 10 1953: 254-268 9 figs.
- 878.—Krott, P. Über einen Versuch, zwei Elche als Zugtiere zu benützen. Z. Tierpsychol. 11 1954: 304-318 17 figs.
- 879.—Kruidenier, F. J. A seal host of the acanthocephalan *Corynosoma*: Correction. J. Parasit. 40 1954: 363-364.
- 880.—Krumbiegel, I. Biologie der Säugetier. Ein Handbuch. Krefeld (Verlag GMBH) 1954: 4-5, 145-240 89 figs.; 6-7, 241-355 104 figs.
- 881.—Krumbiegel, I. Areal und Populationsgrösse bei Insektieren. Z. Morph. Ökol. 43 1954: 63-81 2 figs.
- 882.—Kruttsch, P. H. North American jumping mice (Genus *Zapus*). Publ. Mus. Nat. Hist. Univ. Kansas 7 1954: 349-472 47 figs.
- 883.—Kruttsch, P. H. A key to the bats of Western North America, north of Mexico. Nat. Hist. Misc. Chicago 133 1954: 1-6 2 figs.
- 884.—Kruttsch, P. H. Notes on the habits of the bat *Myotis californicus*. J. Mammal. 35 1954: 539-545 2 figs.
- Kruttsch, P. H. see Vaughan.
- 885.—Krysiak, K. Ligamentum nuchae of *Bison bonasus*. Folia morph., Warsz. 2 1951: 271-282 4 figs.
- 886.—Kühlhorn, F. Beobachtungen an einem gefangenen Hamster (*Cricetus cricetus* L.). Zool. Gart., Lpz. 20 1953: 193-194.
- 887.—Kühlhorn, F. Säugetierkundliche Studien aus Süd-Mattogrosso. 2. Edentata, Rodentia. Säugetierk. Mitt. 2 1954: 66-72 1 fig.
- 888.—Kühlhorn, F. Gefügesetzliche Untersuchungen an Neuweltaffen (*Cebus apella* L. und *Alouatta caraya* Humboldt). Z. Säugetierk. 20 1954: 13-36.
- 889.—Kühlhorn, J. Kleine Irrtümer. Z. Säugetierk. 18 1953: 188-189.
- 890.—Kühlhorn, J. Der Gang des Gibbons. Z. Säugetierk. 19 1954: 180.
- 891.—Kühn, E. Simultanvergleich gesehener Mengen beim Rhesusaffen. Z. Tierpsychol. 10 1953: 268-296 18 figs.
- 892.—Kühn, E. Zum Wachstum männlicher Borstengürteltiere. (*Chaetophractus villosus* Fisch.). Zool. Gart., Lpz. 20 1953: 82-85 3 figs.
- 893.—Kuhn-Schnyder, E. Der Ursprung der Säugetier. Vjschr. naturf. Ges. Zürich 99 1954: 165-197 16 figs.
- Kulik, I. L. see Tupikova.
- Kulkarny, H. L. see Katarki.
- 894.—Kuns, M. L. and Tashian, R. E. Notes on mammals from northern Chiapas, Mexico. J. Mammal. 35 1954: 100-103.
- 895.—Künzl, H. Zur Gefrassigkeit des Maulwurfs. Zool. Gart., Lpz. 20 1954: 314-315.
- 896.—Kuroda, N. The present status of the protection of birds and mammals in Japan. Proc. 7th Pacif. sci. Congr. 4 1953: 719-727.
- 897.—Kurten, B. The Chinese *Hipparion* fauna. Comment. Biol., Helsingfors 13 4 1952: 1-82 30 figs.
- 898.—Kurten, B. On the variation and population dynamics of fossil and recent mammal populations. Acta zool. fenn. 76 1953: 1-122 37 figs.
- 898A.—Kurten, B. Observations on allometry in mammalian dentitions; its interpretation and evolutionary significance. Acta zool. fenn. 85 1954: 1-13 4 figs.
- 898B.—Kurten, B. The type collection of *Ictitherium robustum* (Gervais, ex Nordmann) and the radiation of the Ictitheres. Acta zool. fenn. 86 1954: 1-26 14 figs.

899.—Kurten, B. Population dynamics—a new method in paleontology. *J. Paleont.* 28 1954: 286–292 3 figs.

900.—[Kuznetsov, B. A.] [Contribution to the fauna of Lithuanian mammals.] *Bull. Soc. Nat. Moscow (Biol.)* 59 (4) 1954: 7–16. [In Russian.]

901.—Lachiver, F. Etude biochimique de la fonction thyroïdienne d'un hibernant: La marmotte (*Marmota marmota* L.). *C.R. Soc. sav. Paris & Dép.* No. 77 1954: 133–138 2 figs.

902.—Lack, D. The natural regulation of animal numbers. Oxford (Clarendon Press) 1954 pp. viii + 343 frontis (col.) 52 figs.

903.—Ladman, A. J. Mitotic activity in the anterior pituitary of the pregnant mouse. *Anat. Rec.* 120 1954: 395–407 10 figs.

Lagerstedt, S. *see* Glimstedt.

904.—[Lakoza, I. I.] [Camel breeding.] Moscow, 1953 1–311 ill. [In Russian.]

905.—Lamb, F. B. The fisherman's porpoise. *Nat. Hist., N.Y.* 63 1954: 231–232.

906.—Lancaster, D. G. A check list of the mammals of Northern Rhodesia. Lusaka (Game Dept., N. Rhodesia) 1953: vii + 56.

907.—Lang, E. M. Ueber Fang und Eingewöhnung Afrikanischer Elefanten im Jahre 1952. *Zool. Gart., Lpz.* 20 1954: 294–306 4 figs.

Lanski, L. M. *see* Littmann.

908.—Lapage, G. Myxomatosis in rabbits in Great Britain. *Nature, Lond.* 173 1954: 856.

909.—Larsell, O. The development of the cerebellum of the pig. *Anat. Rec.* 118 1954: 73–107 23 figs.

Laser, H. *see* Lutwak-Mann.

910.—Lastours, de. Sur les sondrages acoustiques réalisables par les cheiroptères. *P.V. Soc. Sci. phys. nat. Bordeaux* 1946–48 [1952] 60–62.

911.—Lathrop, K. A. and Harper, P. V. Long-term recovery of metabolic products from rats. *Science* 119 1954: 447–448 1 fig.

912.—Latif, A. and Khan, A. W. Zinc phosphate as a raticide. *Proc. 4th Pakistan sci. Conf.* pt. 3 1952: 75.

913.—Latimer, H. B. Growth of the hypophysis, thyroid and suprarenals in the fetal dog. *Anat. Rec.* 120 1954: 495–514 6 figs.

Latyszewski, M. *see* Falconer.

914.—Laurie, E. M. O. and Hill, J. E. List of land mammals of New Guinea, Celebes and adjacent islands, 1758–1952. *Brit. Mus. (Nat. Hist.)* 1954: 1–175 3 pls. 1 map.

915.—Lavocat, R. Sur diverses découvertes récentes de gisements de Vertébrés africains et leur conséquences géologiques. *C.R. Soc. Geol. France* 14 1953: 284–286.

916.—Lavocat, R. J. M. Possibilité et nécessité d'une classification unique pour les mammifères fossils et actuels. *C.R. Congr. Geol. Int. Alger* 19 1952 (1954): 23–24.

Lavocat, R. *see* Crusafont Pairo, M.

Lavocat, R. *see* Gorodiski.

917.—Law, M. E. Lingual proprioception in pig, dog and cat. *Nature, Lond.* 174 1954: 1107–1108.

918.—Law, P. G. & Burstall, T. Heard Island. Interim Rep. Aust. Nat. Antarct. Res. Exped. No. 7 1953: 1–32 12 pls.

919.—Lawrence, B. and Schevill, W. E. *Tursiops* as an experimental subject. *J. Mammal.* 35 1954: 225–232.

920.—Laws, R. M. Giant ovaries of a blue whale. *Nature, Lond.* 173 1954: 1003 1 fig.

921.—Layne, J. N. The os clitoridis of some North American Scuriidae. *J. Mammal.* 35 1954: 357–366 2 figs.

922.—Layne, J. N. The biology of the red squirrel, *Tamiasciurus hudsonicus loguax* (Bangs), in Central New York. *Ecol. Monogr.* 24 1954: 227–267 9 figs.

923.—Layne, J. N. and Benton, A. H. Some speeds of small mammals. *J. Mammal.* 35 1954: 103–104.

924.—Layne, J. N. and Hamilton, W. J. The young of the woodland jumping mouse, *Napaeozapus insignis insignis* (Miller). *Amer. Midl. Nat.* 52 1954: 242–247 1 fig.

925.—Leakey, L. S. B. H. J. Allen Turner. *J. E. Afr. Ug. nat. Hist. Soc.* 22 1954: 111.



926.—Leakey, L. S. B. The giant animals of prehistoric Tanganyika. Ill. Lond. News 224 1954: 1047 3 figs.

927.—Lebrument, J. Motricité des réservoirs gastriques chez les ruminants. Ann. Inst. nat. Agron. 40 [1954]: 1-75 37 graphs.

928.—Lechleitner, R. R. Age criteria in mink, *Mustela vison*. J. Mammal. 35 1954: 496-503 2 figs.

929.—Lechleitner, R. R. Least weasel in Glacier National Park. J. Mammal. 35 1954: 594.

930.—Lee, J. A. Range of *Peromyscus eremicus eremicus* in Nevada. J. Mammal. 35 1954: 450.

Leedal, G. P. *see* Guest.

931.—Leeuwen, L. van. On the characters of *Sorex exiguus* van den Brink as compared with those of *Sorex minutus* L. Proc. Acad. Sci. Amst. 57C 1954: 332-338.

932.—Legoux, J.-P., Petter, F. and Wisner, A. Etude de l'audition chez des mammifères à bulles tympaniques hypertrophiées. Mammalia, Paris 18 1954: 262-271 5 figs.

Legoux, J.-P. *see* Wisner.

933.—Le Gros Clark, W. E. History of the Primates. An introduction to the study of fossil man. 4th edn. London, Brit. Mus. (Nat. Hist.) 1954: 1-119 1 pl. 40 figs.

934.—Le Gros Clark, W. E. The antiquity of *Homo sapiens* in particular and of the Hominidae in general. Sci. Progr. 42 1954: 379-395.

935.—Le Gros Clark, W. E. Reason and fallacy in the study of fossil man. Advanc. Sci. 11 1954: 280-292 figs.

936.—Le Gros Clark, W. E. Prof. F. Wood Jones, F.R.S. Nature, Lond. 174 1954: 772-773.

937.—Lehmann, E. v. Zur Kleinsäuger-Fauna Fürstentums Liechtenstein. Bonn. zool. Beitr. 5 1954: 17-31 figs.

938.—Lehmann, U. Die Fauna des "Vogelherds" bei Stetten ob Lontal (Württemberg). Neues Jb. Geol. Pal. Abh. 99 1954: 33-146 4 pls. 7 figs.

Lejeune, J. *see* Turpin.

Leleup, N. *see* Bouillon.

939.—Lemke, K. Morphologie und Homologie des Kaureliefs der Backzähne der Insektivoren. Wiss. Z. Univ. Greifswald 3 1954: 17-47 32 figs.

940.—Lensink, C. J. Occurrence of *Microtus xanthognathus* in Alaska. J. Mammal. 35 1954: 259-260.

941.—Lensink, C. J. Deformed jaw in an Alaskan brown bear (*Ursus*). J. Mammal. 35 1954: 438-439.

Leonard, R. G. *see* Sealander.

942.—Leonardi, P. Les mammifères nains du Pléistocène Méditerranéen. Ann. Paleont. 40 1954: 189-201 7 figs.

Leone, C. A. *see* Dolyak.

943.—Leone, E. Ergothioneine in the equine ampullar secretion. Nature, Lond. 174 1954: 404-405.

944.—Leopold, A. S. Dichotomous forking in the antlers of white-tailed deer. J. Mammal. 35 1954: 599-600 1 fig.

945.—Leopold, A. S. and Darling, F. F. Wildlife in Alaska, an ecological reconnaissance. New York (Ronald Press Co.) 1953: pp. ix + 129 16 pls. text illust.

Lepersonne, J. *see* Hopwood.

946.—Leutscher, A. The edible dormouse in Britain. Discovery, Lond. 15 1954: 70-71 1 fig.

947.—Levan, A. Colchicine-induced C-mitosis in two mice ascites tumours. Hereditas 40 1954: 1-64 13 figs.

948.—Lewis, C. B. Whales in Jamaican waters. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 65 1954: 75.

949.—Lewis, C. B. The bat fauna of the St. Clair cave. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 68 1954: 143-146 fig.

950.—Lewis, F. The rehabilitation of the koala in Victoria. Vict. Nat., Melb. 70 1954: 197-200 3 pls.

Lewis, Y. S. *see* Smith.

Libersa, Cl. *see* Olivier.

951.—Lieb, J. R. and Wilber, C. G. Some hematological studies on the Alaskan ground squirrel. Trans. Amer. micr. Soc. 73 1954: 412-415.

952.—[Likhachev, G. N.] [Reproduction and populations of *Muscardinus avellanarius*.] Zool Zh., Moscow 33 1954: 1171-1182. [In Russian.]

953.—Lindahl, P. E. and Nilsson, A. On the occurrence of sperm antagglutin in the female rabbit. *Ark. Zool.* 7 1954: 223-226.

954.—Lindemann, W. Zur Rassenfrage und Fortpflanzungsbiologie des karpatischen Braunbären, *Ursus arctos arctos* Linné, 1758. *Säugetierk. Mitt.* 2 1954: 1-7 2 figs.

Lindenlaub, E. *see* Precht.

Lingaas, P. *see* Bjarnason.

955.—Linke, W. Der Rothirsch. Neue Brehm-Bucherei, Wittenberg-Lutherstadt 1954: 94 52 figs.

956.—Linn, I. Some Norwegian small mammal faunas; a study based on trappings in West and North Norway. *Oikos* 5 1954: 1-24 4 figs.

957.—Lipkow, J. Über das Seitenorgan des Goldhamsters *Mesocricetus auratus* Waterh. *Z. Morph. Ökol.* 42 1954: 333-372 16 figs.

958.—Lisowski, F. P. The vascularization of the ovary in the rat. *Proc. Soc. Study Fertility* No. 5 1953: 37-54 8 figs.

959.—Littmann, R. A., Lanski, L. M. and Rhine, R. J. Studies of individual and paired interactional problem solving behavior of rats (*Mus norvegicus albinus*). *Behavior* 7 1954: 189-206 1 fig.

960.—Liu, T. T. Hybridization between *Peromyscus maniculatus oreas* and *P. m. gracilis*. *J. Mammal.* 35 1954: 448-449.

961.—Liu, T. T. Monozygotic twinning in *Peromyscus maniculatus*. *J. Mammal.* 35 1954: 449-450.

962.—Llanos, A. C. and Crespo, J. A. Ecología de la Vizcacha (*Lagotomus maximus maximus* Blainv.) en el nordeste de la provincia de Entre Ríos. *Rev. Invest. Agric. Buenos Aires* 6 1952: 289-378, 10 pls.

963.—Llewellyn, L. M. and Enders, R. K. Trans-uterine migration in the raccoon. *J. Mammal.* 35 1954: 439.

964.—Llewellyn, L. M. and Enders, R. K. Ovulation in the raccoon. *J. Mammal.* 35 1944: 440.

Loaring, W. H. *see* Serventy.

965.—Lockey, R. M. The Atlantic grey seal. *Oryx* 2 1954: 384-387 map.

966.—Lockley, R. M. The North Atlantic grey seal. *Bull. Mammal. Soc. Brit. Is.* 1 1954: 13-14.

967.—Lockley, R. M. The seals and the curragh. Introducing the natural history of the grey seal of the North Atlantic. London (J. & M. Dent) 1954 pp. vii + 149 frontis. 6 pls. text illust.

968.—Lockley, R. M. The observation of mammals. *Field.* 203 1954: 1020 4 figs.

969.—Lockley, R. M. Myxomatosis—a factual survey. *Field.* 204 1954: 1174-1175 4 figs.

Loomis, R. B. *see* Jones.

970.—Lopane, F. Sull'età del riempimento della grotta del Pippi (Uliveto-Pisa). *Mem. Soc. tosc. Sci. nat.* 56A 1949: 18-20.

971.—Louvel, M. Quelques observations sur le "Fosa." *Bull. Acad. Malgache N.S.* 31 1954: 45-46 1 fig.

Lovelock, J. E. *see* Smith.

972.—Lowes, R. H. G. The giant armadillo. *Zoo Life, Lond.* 9 1954: 97-98, 1 fig.

973.—Lucas, D. R. Retinal dystrophy in the Irish Setter. I. Histology. *J. exp. Zool.* 126 1954: 537-551. 13 figs.

974.—Ludwig, K. S. Das Verhalten der Thymonukleinsäure (DNA) während der Befruchtung und den ersten Segmentationsstadien bei der Ratte und dem Goldhamster. *Arch. Biol., Paris* 65 1954: 135-178 1 pl. 8 figs.

975.—[Lukyantchenko, A. A.] [Changes in northern border of the range of *Mesocricetus raddei nigriculus* Nehr., 1898.] *Zool. Zh., Moscow* 33 1954: 218-220 1 fig. [In Russian.]

976.—Lund, H. M. The walrus and its visits to the Norwegian coast since 1900. *Norsk Hvalfangsttid.* 43 1954: 639-646 1 fig.

977.—Lund, H. M.-K. The walrus (*Odobenus rosmarus* (L.)) off the coast of Norway in the past and after the year 1900, together with some observations on its migrations and "cruising speeds." *Astarte* 8 1954: 1-12 2 figs.

978.—Lundy, W. E. Howlers. *Nat. Hist., N.Y.* 63 1954: 128-133 6 figs.

979.—Lundy, W. E. Mr. Coati. Nat. Hist., N.Y. 63 1954: 274–279 figs.

980.—Luttschwager, J. Studien an vorgeschichtlichen Wirbeltieren Schleswig-Holsteins. Schr. naturw. Ver. Schl.-Holst. 27 1954: 22–33 1 fig.

981.—Lutwak-Mann, C. Note on the chemical composition of bovine follicular fluid. J. agric. Sci. 44 1954: 477–480 1 fig.

982.—Lutwak-Mann, C. and Laser, H. Bicarbonate content of the blastocyst fluid and carbonic anhydrase in the pregnant rabbit uterus. Nature, Lond. 173 1954: 268–269 1 fig.

983.—Lyman, C. P. Activity, food consumption and hoarding in hibernators. J. Mammal. 35 1954: 545–552.

984.—Lyon, M. F. Absence of otoliths in the mouse: an effect of the pallid mutant. J. Genet. 51 1953: 638–650 5 figs.

985.—Lyon, M. F. Stage of action of the litter-size effect on absence of otoliths in mice. Z. indukt. Abstamm.-u. Vererb. Lehre 86 1954: 289–292. 1 fig.

Lyon, M. F. *see* Carter.

986.—Maberley, C. T. A. “An animated fir-cone”—the pangolin. Afr. Wild Life 8 1954: 280–282 2 figs.

Mabon, R. M. *see* Hutchison.

987.—McCarley, W. H. Fluctuations and structure of *Peromyscus gossypinus* populations in eastern Texas. J. Mammal. 35 1954: 526–532.

988.—McCarley, W. H. Natural hybridization in the *Peromyscus leucopus* species group of mice. Evolution 8 1954: 314–323 3 figs.

989.—McCarthy, F. D. Buffalo hunting in Arnhem Land. Aust. Mus. Mag. 11 1954: 252–256 4 figs.

990.—Macchiarello, A. Reservoirs and vectors of plague. J. trop. Med. (Hyg.) 57 1954: 3–8, 45–48, 65–69, 87–94, 116–121, 139–146, 158–171, 191–197, 220–224, 238–243, 275–279, 294–298.

991.—McClellan, J. An otter catch on the Gila River in southwestern New Mexico. J. Mammal. 35 1954: 443–444.

992.—McClung, R. M. The unpredictable Platypuses. Anim. Kingd. 57 1954: 110–111 1 fig.

993.—McDiarmid, A. and Austwick, P. K. C. Occurrence of *Haplosporangium parvum* in the lungs of the mole (*Talpa europaea*). Nature, Lond. 174 1954: 843–844 1 fig.

McDonald, I. R. C. *see* Hartman.

994.—Macdonald, J. B. A new *Pseudaelurus* from the lower Snake Creek fauna of Nebraska. J. Paleont. 28 1954: 67–69 1 fig.

995.—MacDonald, S. D. Report on biological investigations at Mould Bay, Prince Patrick Island, N.W.T., 1952. Bull. nat. Mus. Can. No. 132 1954: 214–238.

996.—McEwen, E. H. A sporadic occurrence of an Alaskan fur seal. J. Mammal. 35 1954: 444.

997.—McKenna, M. C. Gray Bull mammals from the Knight formation in Moffat County, Colorado. J. Mammal. 35 1954: 581.

998.—Mackenzie, B. A. Green algal growth on gray seals. J. Mammal. 35 1954: 595–596.

999.—Mackerras, I. M. Animal reservoirs of infection in Australia. Proc. roy. Soc. Vict. 65 1954: 1–23.

1000.—McKerrow, M. J. The lactation cycle of *Elephantulus myurus jamesoni* (Chubb). Phil. Trans. 238B 1954: 62–98 1 pl. 10 figs.

1001.—Mackintosh, N. A. Whales in the Pacific sector of the Southern Ocean. Proc. 7th. Pacif. sci. Congr. 4 1953: 369–370.

1002.—McLaren, A. and Michie, D. Are inbred strains suitable for bio-assay? Nature, Lond. 173 1954: 686–687.

1003.—McLaren, A. and Michie, E. Transmigration of unborn mice. Nature, Lond. 174 1954: 844.

1004.—McLean, D. D. Mountain lions in California. Calif. Fish Game 40 1954: 147–166 1 fig.

1005.—MacMillan, E. W. The effects of interruption of the vasa and inferior epididymal arteries on the cauda epididymis and testis. Proc. Soc. Study Fertility No. 5 1953: 12–19 2 pls. 1 fig.

1006.—McMillan, J. F. Some observations on moose in Yellowstone Park. Amer. Midl. Nat. 52 1954: 392–399 1 fig.

1007.—McMinn, R. M. H. The rate of renewal of intestinal epithelium in the cat. *J. Anat., Lond.* **88** 1954: 527-532 1 pl.

1008.—McNab, B. K. A new record of *Mustela erminea* and *Sorex merriami*. *J. Mammal.* **35** 1954: 430.

1009.—Macy, R. W. and Biggs, J. A. Epizootic in eastern Oregon muskrats associated with massive infection of *Hymenolepis ondatrae* Rider and Macy. *J. Parasit.* **39** 1953: 570.

1010.—Mahaley, M. S. Experimental evidence on the body temperatures of hibernating bats. *J. Elisha Mitchell sci. Soc.* **70** 1954: 122-123.

1011.—Makino, S. Chromosome numbers of some American rodents. *Misc. Rep. Yamashina Inst. Orn. Zool.* No. 3 1953: 86.

1012.—Makino, S. and Yosida, T. H. Breeding experiments of white rats and mice. III. Notes on the abnormal characters found in some inbred strains of white rats and mice. *Misc. Rep. Yamashina Inst. Orn. Zool.* No. 4 1954: 141-145 6 figs. [Japanese with English summary.]

1013.—Makino, S. and others. A strain of Wistar albinos producing a large litter. *Misc. Rep. Yamashina Inst. Orn. Zool.* No. 3 1953: 129-132 1 fig. [Japanese with English résumé.]

1014.—Málaga-Alba, A. Vampire bat as a carrier of rabies. *Amer. J. publ. Hlth.* **44** 1954: 909-918 1 fig.

1015.—Maluquer de Motes, J. Nuevo hallazgo de *Ursus spelaeus* en Cataluna. *Mem. Comun. Inst. Geol. Dip. Prov. Barcelona* **10** 1953: 51.

1016.—Maldonado-Koerdell, M. Mamíferos recientes y fósiles de México. *Ciencia, Mex.* **13** 1953: 79-84.

1017.—Maldonado-Koerdell, M. Segundo hallazgo de sirenidos fósiles en México. *Ciencia, Mex.* **13** 1953: 146-148 1 fig.

Manly, B. M. *see* Barnett.

1018.—Mann, P. H. Four cases of posterior reduplication in the albino Norway rat. *J. Tenn. Acad. Sci.* **29** 1954: 9-11 2 pls.

1019.—Mann, T. On the presence and role of inositol and certain other substances in the seminal vesicle secretion of the boar. *Proc. roy. Soc.* **142B** 1954: 21-32 2 figs.

Mann, T. *see* Glover.

1020.—Mannell, W. A. and Rossiter, R. J. Wallerian degeneration in the rat. The effect of age on the concentration of nucleic acid and phospholipid in intact and sectioned nerves. *J. exp. Biol.* **31** 1954: 198-207 6 figs.

1021.—Manuel, C. G. Philippine wildlife problems. *Proc. 7th Pacif. sci. Congr.* **4** 1953: 683-691 [Mammals: 687-689].

1022.—Manville, R. H. Malocclusion in the rat. *J. Mammal.* **35** 1954: 427.

1023.—Manzer, J. I. Observations on the gray whale. *J. Mammal.* **35** 1954: 444-445.

1024.—[Manzi, S. F.] [A case of the presence of radio-intermedium bone in both carpus of *Equus hemionus*.] *Rep. Acad. Sci. Ukr.* **1** 1953: 33-35 4 figs. [In Ukrainian with Russian summary.]

1025.—Maqsood, M. and Parsons, U. Influence of continuous light or darkness on sexual development in the male rabbit. *Experientia* **10** 1954: 188-189.

1026.—Margolis, L. List of the parasites recorded from sea mammals caught off the west coast of North America. *J. Fish. Res. Bd. Can.* **11** 1954: 267-283.

1027.—Marietan, I. Les fauves du Valais en 1946. *Bull. murith.* No. 63 1946: 102-120.

1028.—Marietan, I. Histoire des fauves du Valais en 1947. *Bull. murith.* No. 64 1947: 103-132.

1029.—Marietan, I. Le loup d'Eischoll. *Bull. Murith.* No. 65 [1945]: 146-148 1 fig.

1030.—Markman, H. C. Fossil mammals. *Mus. Pictorial., Denver* No. 4 1952: 1-62 figs.

1031.—Marples, R. R. Note on the type specimen of the Maori rat. *Trans. roy. Soc. N.Z.* **82** 1954: 703-704.

Marshall, S. B. M. *see* Annison.

Marshall, W. A. *see* Abrams.



1032.—**Martin, B. F.** Serous cells in Brunner's glands of the rabbit. *Nature*, Lond. **174** 1954: 1195–1196.

1033.—**Martin, M. and P. S.** Notes on the capture of tropical bats at Cuevo el Pachon, Tamaulipas. *J. Mammal.* **35** 1954: 584–585.

1034.—**Martinho, J.** As reacções das raças bovinas selectas da Europa nos climos tropicais e subtropicais. *Bol. Soc. Estud. colon. Moçambique* **15** 52 1947: 49–72 5 figs.

1035.—**Martino, L. and Terio, B.** Ricerche e considerazioni su alcuni problemi di morfo-funzionalità dell'inervazione periferica. *Arch. Zool. (ital.) Napoli* **39** 1954: 295–310 3 pls.

1036.—**Masachs Alavedra, V. and Villalta Comella, J. D. de.** Aportación al conocimiento de la cronología de las terrazas fluviales del N.E. de España. Un valioso documento paleontológico. *Mem. Comun. Inst. Geol. Dip. Prov. Barcelona* **10** 1953: 73–77 4 figs.

1037.—**Massart, C.** Contributo allo studio della struttura del clitoride in *Rhinolophus ferrum equinum*. *Mem. Soc. tosc. Sci. nat.* **54** 1947: 18–41 10 figs.

1038.—**Massart, C.** Lo sviluppo dell'utero e della vagina nei chiroteri (*Rhinolophus ferrum equinum*). *Mem. Soc. tosc. Sci. nat.* **54** 1947: 87–135 20 figs.

1039.—**Massart, C.** Contributo allo studio dello sviluppo della borsa faringea nei Chiroteri (*Rhinolophus ferrum equinum*). *Mem. Soc. tosc. Sci. nat.* **57B** 1950: 7–11.

1040.—**Massart, C.** Ipotesi sulle funzioni della borsa faringea in *Rhinolophus ferrum equinum*. *Mem. Soc. tosc. Sci. nat.* **57B** 1950: 12–15.

**Masserman, J. H.** *see* Pechtel.

1041.—**Matheson, C.** The wild goat in Wales. *Rep. W. Wales Fld. Soc. No.* **16** 1954: 13–16 figs.

**Mathew, M. J.** *see* Chacko.

**Mathis, M.** *see* Durand.

1042.—**Matschinski, M.** La nage des êtres aquatiques et les limites mécaniques de l'évolution. *Nature*, Paris No. **3236** 1954: 454–458 10 figs.

1043.—**Matson, J. R.** Observations on the dormant phase of a female black bear. *J. Mammal.* **35** 1954: 28–35 1 pl.

1044.—**Matthes, H. W.** Beiträge zur Kenntnis der Hyaenodontidae (Creodonta). *Paläont. Z.* **28** 1954: 45–55 1 pl. 4 figs.

1045.—**Matthews, L. H.** The hibernation of animals. *Discovery* **15** 1954: 437–442 4 figs.

1046.—**Matthews, L. H.** Research on the mammals of Africa. *Nature*, Lond. **174** 1954: 670–671.

1047.—**Matthey, R.** Un nouveau type de chromosomes sexuels chez un mammifère. *Experientia* **10** 1954: 18 2 figs.

1048.—**Matthey, R.** Nouvelles données sur les formules chromosomiques des Muridae. *Experientia* **10** 1954: 66–67.

1049.—**Matthey, R.** Un cas nouveau de chromosomes sexuels multiples dans le genre *Gerbillus* (Rodentia-Muridae-Gerbillinae). *Experientia* **10** 1954: 464–465 6 figs.

1050.—**Matthey, R.** Nouvelles recherches sur les chromosomes des Muridae. *Caryologia* **6** 1954: 1–44 115 figs.

1051.—**Matthey, R.** Les chromosomes de *Macroscelides rozeti* Duvernoy (Mammalia-Insectivora). Existe-t-il une série polyploïde chez les Macroscelidae. *Rev. suisse Zool.* **61** 1954: 669–677 11 figs.

1052.—**Matthey, R.** Chromosomes et systématique des Canidés. *Mammalia*, Paris **18** 1954: 225–230 14 figs.

1053.—**May, R. M.** La greffe brétoplastique intraoculaire du cercelet chez la souris. *Arch. Anat. micr. Morph. exp.* **43** 1954: 42–57 11 figs.

1054.—**Mayer, G. and others.** Étude de la basophile cytoplasmique des cellules trophoblastiques du rat par les méthodes histochimiques et le microscope électronique. *Arch. Anat. micr. Morph. exp.* **42** 1954: 319–333 10 figs.

1055.—**Mayer, J. and Zighera, C. Y.** The multiple etiology of obesity: production of two types of obesity in littermate mice. *Science* **119** 1954: 96–97.

1056.—Mayer, W. V. and Roche, E. T. Developmental patterns in the Barrow Ground Squirrel, *Spermophilus undulatus barrowensis*. Growth 18 1954: 53-69 14 figs.

1057.—Measroch, V. Growth and reproduction in the females of two species of gerbil, *Tatera brantsi* (A. Smith) and *Tatera afra* (Gray). Proc. zool. Soc. Lond. 124 1954: 631-658 13 figs.

1058.—Meester, J. Research on the mammals of South Africa. Nature, Lond. 174 1954: 1149-1150.

1059.—Meester, J. On the status of the shrew, genus *Mysorex*. Ann. Mag. nat. Hist. (12) 7 1954: 947-950.

1060.—Meinertz, T. The superficial facialis musculature of the Greenland musk-ox, *Ovibos moscatus*. Medd. Grønland 107 1954: 1-60 24 figs.

1061.—Mellor, J. E. M. The mammals of Herefordshire. In Herefordshire. Cent. Vol. Woolhope Nat. Fld. Club 1954: 94-103 3 maps.

Menon, K. V. P. see Nirula.

1062.—Merfield, F. G. The Gorilla of the French Camerouns. Zoo Life, Lond. 9 1954: 84-94 10 figs.

1063.—Mertens, R. Über asymmetrische Zeichnungen bei wildelebenden Säugern. Säugetierk. Mitt. 2 1954: 32-33.

1064.—Merthyr, Lord. The rabbit problem. Quart. J. For. 46 1952: 147-152.

1065.—[Mertz, P. A.] [The wolf in Voronezh Province, ecology and organization of control.] Nasimovich, A. A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 117-135 3 figs. [In Russian.]

1066.—Meyer, R. de. Les organites epithelio-neuro-vasculaires de la base du cœur chez le Cynocéphale. Arch. Biol., Paris 65 1954: 315-338 1 pl.

1067.—Meyer-Holzappel, M. Lernversuche mit Riegelkasten bei zwei Gibbons. Arch. néerl. Zool. 10 Suppl. 2 1953: 79-91 2 figs.

Meyer-Lohmann, J. see Aschoff.

Michie, D. see McLaren.

Miesse, M. L. see Gould.

Mikiewiczowa, Z. see Bilewicz.

Millen, J. W. see Woollam.

1068.—Miller, G. S. Jr. and Johnson, D. H. Bibliography of Gerrit Smith Miller, Jr. J. Mammal. 35 1954: 329-344.

1069.—Miller, L. S. The present status of systematic Mammalogy in Iowa with some notes on recent Mammal collecting within the State. Proc. Iowa Acad. Sci. 61 1954: 556-560.

1070.—Miller, N. G. and Drake, C. H. Infectious diseases in native wild animals of the Columbia Basin, Washington. Northw. Sci. 28 1954: 135-156.

1071.—Miller, R. S. Food habits of the wood-mouse *Apodemus sylvaticus* (Linné, 1758), and the bank vole, *Clethrionomys glareolus* (Schreber, 1780), in Wytham Woods, Berkshire. Säugetierk. Mitt. 2 1954: 109-114.

1072.—Minner, J. L. The old man of the ice floes. Ctry. Life, Lond. 116 1954: 416-418 6 figs.

1073.—Mitchison, N. A. The effect on the offspring of maternal immunization in mice. J. Genet. 51 1953: 406-420.

1074.—Miyazaki, I. Survey of whaling operations from land stations in waters adjacent to Japan in 1953. Norsk Hvalfangsttid. 43 1954: 181-192 7 figs.

1075.—Mohr, E. Kleine Beobachtungen am Kopenhagener Okapi. Zool. Gart., Lpz. 20 1953: 73-76 4 figs.

1076.—Mohr, E. Die Leipziger Wisentzucht. In Schneider (K. M.) Vom Leipziger Zoo, Leipzig (Geest & Portig) 1953 pp. 65-71 7 figs.

1077.—Mohr, E. Die freilebenden Nagetiere Deutschlands und der Nachbarländer, Jena (Gustav Fischer), 3rd edit. 1954 pp. ix + 212 200 figs.

1078.—Möhres, F. P. Über die Ultraschallorientierung der Huftisen-nasen (Chiroptera-Rhinolophinae). Z. vergl. Physiol. 34 1953: 547-588 16 figs.

1079.—Moir, R. J., Somers, M., Sharman, G. and Waring, H. Ruminant-like digestion in a marsupial. Nature, Lond. 173 1954: 269-270.

Moll, J. see Bartheld.

1080.—Montagu, M. F. A. The Piltown nasal turbinate and bone implement: some questions. *Science* 119 1954: 884-886.

1081.—Montagu, M. F. A. The direction and position of the mental foramen in the great apes and man. *Amer. J. Phys. Anthropol.* 12 1954: 503-518.

1082.—Moog, F. and others. Growth and cytochemistry of the adrenal gland of the mouse from birth to maturity. *Anat. Rec.* 120 1954: 873-891 17 figs.

1083.—Moore, C. B. Ways of mammals in fact and fancy. New York (Ronald Press) 1953: xi + 273.

1084.—Moore, J. C. Want to see a Florida manatee? *Anim. Kingd.* 57 1954: 11-13 1 fig.

1085.—Moran, P. A. P. The statistical analysis of the Canadian lynx cycle. II. Synchronization and Meteorology. *Aust. J. Zool.* 1 1953: 291-298.

1086.—Moran, R. J. Trapping and marking squirrels on a refuge in southern Illinois. *Trans. Ill. Acad. Sci.* 46 1953: 258-262 1 fig.

1087.—Morgan, W. C. Jr. A new crooked tail mutation involving distinctive pleiotropism. *J. Genet.* 52 1954: 354-373 2 pls. 6 figs.

1088.—Moricard, R. Observation of *in vitro* fertilization in the rabbit. *Nature, Lond.* 173 1954: 1140 1 fig.

1089.—[Morozova-Turova, L. G.] [*Pitymys subterraneus* and *Vespertilio marinus* in Bialowiezha. *Bull. Soc. Nat. Moscow* 59 5 1954: 93-94. [In Russian.]

1090.—Morris, K. R. S. The relationship of mammals to their forest habitat. *Bull. Mammal. Soc. Brit. Is.* 2 1954: 2-6.

1091.—Morris, W. J. An Eocene fauna from the Cathedral Bluffs tongue of the Washakie Basin, Wyoming. *J. Paleont.* 28 1954: 195-203 2 pls. 1 fig.

1092.—Morrison, P. R., Ryser, F. A. and Strecker, R. L. Growth and the development of temperature regulation in the tundra redback vole. *J. Mammal.* 35 1954: 376-386 3 figs.

1093.—Morrison-Scott, T. C. S. Dr. G. H. H. Tate. *Nature, Lond.* 173 1954: 190.

1094.—Morrison-Scott, T. C. S. Proposed use of the plenary powers for the purpose of stabilizing the name of the Virginia Deer. *Bull. Zool. Nomencl.* 9 1954: 298.

Morrison-Scott, T. C. S. *see* Ellerman.

Mosier, H. D. *see* Richter.

1095.—Mosimann, W. Systématisation des ramifications du nerf vague dans le plexus solaire chez le rat blanc. *Rev. suisse Zool.* 61 1954: 323-334 3 figs.

1096.—Moss, S., Wrenn, T. R. and Sykes, J. F. Some histological and histochemical observations of the bovine ovary during the estrous cycle. *Anat. Rec.* 120 1954: 409-433 22 figs.

1097.—Moul, E. T. Preliminary report on land animals at Onotoa Atoll, Gilbert Islands. *Atoll Res. Bull.* No. 28 1954: 1-28 [Mammals pp. 2-3].

1098.—Moustafa, V. S. Additional information on the skull of *Prozeuglodon isis* and the morphological history of the Archaeoceti. *Proc. Egypt. Acad. Sci.* 9 1954: 80-88 1 pl. 1 fig.

1099.—Mouta, F. Possibilidade de existência de Préhominídeos no sul de Angola (Leba, Humpatu). *An. Inst. Med. trop., Lisboa* 10 4 fasc. 2 1953: 2905-2911 1 fig.

1100.—Muir, A. R. The development ventricular part of the conducting tissue in the heart of the sheep. *J. Anat., Lond.* 88 1954: 381-391 4 pls. 1 fig.

Mullen, J. T. *see* Sullivan.

Müller, C. *see* Bloch.

1101.—Müller, H. Zur Fortpflanzungsbiologie des Hermelins (*Mustela erminea* L.). *Rev. suisse Zool.* 61 1954: 451-453.

1102.—Müller, J. Observations on the orbital region of the skull of the Mystacoceti. *Zool. Meded.* 32 1954: 279-290 3 figs.

1103.—Müller-Using, D. Simpsons Neuordnung der Mammalia in ihrer Bedeutung für die deutsche Säugetierkunde. *Säugetierk. Mitt.* 2 1954: 102-109.

1104.—Müller-Using, D. Beiträge zur Oekologie der *Marmota m. marmota* (L.). *Z. Säugetierk.* 19 1954: 166-177 4 pls. 2 figs.

- 1105.—[Muratov, M. V.] [Miocene and Pliocene history of development of the Crimean Peninsula.] Bull. Soc. Nat. Moscow Geol. 29 1954: 3–20 5 figs. [In Russian.]
- 1106.—Murie, O. J. Progress in management of large mammals with special reference to the wapiti in Jackson Hole. Proc. 7th Pacif. sci. Congr. 4 1953: 666–669.
- 1107.—Murray, I. M. A second record of the water shrew in Skye. Scot. Nat. 66 1954: 56.
- Murray, J. G. *see* Evans.
- 1108.—Murray, P. D. F. The fusion of parallel long bones and the formation of secondary cartilage. Aust. J. Zool. 2 1954: 364–380 4 pls.
- 1109.—Murray, R. W. The place of the Australopithecinae among human fossils. Proc. Ind. Acad. Sci. 63 1954: 47–53.
- 1110.—Musacchia, X. J. Cannibalism and other observations of captive ground squirrels. J. Mammal. 35 1954: 445–447.
- 1111.—Musil, R. Die Grotte Nr. 16 im Öden Tal im Mähr. Karst. Čas. moravsk. Mus. 38 1953: 87–100 6 figs. [Czech with German summary.]
- 1112.—Musil, R. Der Fund eines Mammutskelettes in Jezov bei Gaya. Čas. moravsk. Mus. 39 1954: 212–216 2 figs. [German summary.]
- Muto, R. *see* Coppini.
- 1113.—Nachtsheim, H. Die Toten der Säugetiergesellschaft 1939–1951. Z. Säugetierk. 19 1954: 38–44.
- 1114.—Nachtsheim, H. Der Modellversuch am Tier in seiner Bedeutung für das Verständnis menschlicher Erb-leiden. Experientia 10 1954: 317–326 3 figs.
- 1115.—Narkiewicz, O. The anthropomorphology of splenic muscle. Folia morph. Warszawa 4 1953: 219–240 10 figs. [Polish with English rés.]
- 1116.—Nath, B. On a collection of Mammals from Assam (India) with special reference to the Rodents. Rec. Indian Mus. 50 1953: 271–285.
- 1117.—Natuschke, G. Zur Verbreitung der Fledermäuse in der Oberlausitz. Abh. Naturkundemus-Görlitz 34 1954: 73–83 map.
- 1118.—[Naumov, N. P.] [Types of rodent populations and their ecological significance.] Zool. Zh., Moscow 33 1954: 268–289 6 figs. [In Russian.]
- 1119.—Nay, T. and Fraser, A. S. Growth of the mouse coat. III. Patterns of hair growth. Aust. J. biol. Sci. 7 1954: 361–367 9 figs.
- 1120.—Neal, E. G. The behaviour and reproductive cycle of the badger. Bull. Mammal. Soc. Brit. Is. 1 1954: 11–13.
- Neal, E. G. *see* Hewer.
- 1121.—Negumi, A. List of desert animals seen or collected during the periods shown. Bull. zool. Soc. Egypt No. 8 1949: 20–21.
- 1122.—Neseni, R. Über den Einfluss von Follikelhormon auf den Tierkörper. Z. Säugetierk. 19 1954: 160–165.
- 1123.—Nettelblad, S. C. Die Lobierung und innere Topographie der Säugerleber, nebst Beiträgen zur Kenntnis der Leberentwicklung beim Goldhamster (*Cricetus auratus*). Acta anat. Suppl. 20 1954: 1–251 103 figs.
- 1124.—Neubaur, F. Ziehende Fledermäuse. Säugetierk. Mitt. 2 1954: 31.
- 1125.—Nicholson, A. J. Food of a beaked whale. J. Mammal. 35 1954: 124.
- 1126.—Nicholson, B. D. The African elephant (*Loxodonta africana*). Afr. wild Life 8 1954: 190–197 3 figs., 313–332 4 figs.
- Nieuwenhoven, P. J. van *see* Wilde.
- Nilsson, A. *see* Lindahl.
- 1127.—Niort, P. L. Ossements de mammifères extraits des alluvions de la Loire. C.R. Socs. sav. Paris & Dép. No. 76 1952: 107–118 6 figs.
- 1128.—Nirula, K. K., Antony, J. and Menon, K. P. V. The flying fox (*Pteropus edwardsii*)—A pest of coconut palm in India. Indian Coconut J. 7 71–76 3 figs.
- 1129.—Nishiwaki, M., Hibiya, T. and Kimura, S. On the sexual maturity of the sei whale of the Bonin waters. Sci. Rep. Whales Res. Inst. Tokyo No. 9 1954: 165–177 11 figs.



1130.—Nishiwaki, M. and Yagi, T. On the age-determination method of the toothed whale by the study of the tooth. *Proc. Japan Acad.* **30** 1954: 399-404 5 figs.

1131.—Nobis, G. Zur Kenntnis der ur- und frühgeschichtlichen Rinder Nord- und Mitteldeutschlands. *Z. Tierzucht. Zuchtungsbiol.* **63** 1954: 155-194 4 figs. 19 diagrams.

1132.—Noronha, R. P. More notes on the Indian Buffalo. *J. Bombay nat. hist. Soc.* **52** 1954: 202-204.

1133.—Norris, C. E. The future of wild life in Ceylon. *Ctry. Life, Lond.* **116** 1954: 890-892 7 figs.

Norris, K. S. *see* Reeder.

1134.—Nouvel, J. Spirochétoses des animaux sauvages. *Mammalia*, Paris **18** 1954: 112-123.

1135.—Nouvel, J. Les spirochétoses des animaux sauvages. (2<sup>e</sup> partie). *Mammalia*, Paris **18** 1954: 277-286.

Nouvel, J. *see* Urbain.

1136.—[Novikov, G. A.] [Game animals and birds of economic importance in the forest zone.] *Anim. World U.S.S.R.* (ed L. V. Arnoldi) **4** 1953: 651-661. [In Russian.]

Novikov, G. A. *see* Vinogradov.

Nunn, W. J. *see* Winter.

Oakley, C. L. *see* Batty.

1137.—Oakley, K. P. Dawn of man in South Africa. *Proc. roy. Instn. G.B.* **35** 1954: 641-657 4 figs.

1138.—Oakley, K. P. Evidence of fire in South African cave deposits. *Nature, Lond.* **174** 1954: 261-262.

1139.—Oakley, K. P. The dating of the Australopithecinae of Africa. *Amer. J. Phys. Anthropol.* **12** 1954: 9-28 2 pls.

Oakley, K. P. *see* Weiner.

1140.—Oberfeld, H. A research on the structure of the buccinator muscle of a dog. *Folia morph., Warszawa* **4** 1953: 245-256 2 figs. [Polish with English rés.]

1141.—Oboussier, H. Zur Kenntnis der Hypophyse von *Sarcophilus ursinus* Harris. *Zool. Anz.* **152** 1954: 147-153 5 figs.

1142.—[Obrutchev, V. A.] [Find of mammoth bones in Southern Siberia.] *Bull. Acad. Sci. URSS geol.* **2** 1954: 142-143.

Offermann, P. B. *see* Hill.

1143.—Ogawa, T. On the musculature of the sinus venosus and its continuation with the so-called conducting system of the whale's heart. *Sci. Rep. Whales Res. Inst. Tokyo No. 9* 1954: 11-35 7 figs.

1144.—Ogilvie, C. S. The behaviour of seladang (*Bibos gaurus*). *Malay. Nat. J.* **9** 1954: 1-10 4 pls.

Ohm-Kettner, I.-D. *see* Herter.

1145.—Ohnesorge, K. Ludwig Heck †, 1860-1951. *Z. Säugetierk.* **19** 1954: 48-56 1 pl.

Oliff, W. D. *see* Johnston.

1146.—Oliver, J. The extinct blue-buck (*Ozanna leucophaea* Pallas). *Afr. wild Life* **8** 1954: 232-235 2 figs.

1147.—Olivier, G. and Depreux, R. L'omoplate du Semnophète. *Mammalia*, Paris **18** 1954: 181-211 6 figs.

1148.—Olivier, G. and Libersa, Cl. L'os coxal et la bassin du Semnophète. *Mammalia*, Paris **18** 1954: 287-328 10 figs.

1149.—Omura, H. and Fujino, K. Sei whales in the adjacent waters of Japan. II. Further studies on the external characters. *Sci. Rep. Whales Res. Inst. Tokyo. No. 9* 1954: 89-103 10 figs.

Ormsbee, J. B. S. *see* Wood.

1150.—Orr, R. T. Natural history of the pallid bat, *Antrozous pallidus* (Le Conte). *Proc. Calif. Acad. Sci.* (4) **28** 1954: 165-246 28 figs.

1151.—Osmaston, H. A. Kalinzu Forest fruit bats. *J. E. Afr. nat. Hist. Soc.* **22** 1953: 74-75.

1152.—Ottaviani, G. and Donini, I. Il sistema linfatico della talpa. (*Talpa europaea*). *Arch. zool. ital. Napoli* **38** 1954: 419-440 2 pls.

1153.—Owen, J. S. A field key to the genera of Sudan rodents. *Sudan Notes & Records* **34** 1953: 104-113.

1154.—Owen, O. S. Merriam's life zone concept and the distribution of certain small mammals in central New York. *J. Mammal.* **35** 1954: 579-581.

Oyaert, W. *see* Bouckaert.

Øynes, P. *see* Ruud.

1155.—Packard, R. L. Notes on the defensive behaviour of gray and fox squirrels while moving their young. Trans. Kansas Acad. Sci. **57** 1954: 471-472.

1156.—Paclt, J. Dürfen die Seiten-drüsen als spezifisch-taxonomisches Merkmal der *Clethrionomys*-Arten aufgefasst werden (Rodentia)? Zool. Anz., Lpzg. **153** 1954: 321-322.

1157.—Pales, L. and Wernert, P. Un mandibule pathologique de grand bovide du loess d'Achenheim (Bas-Rhin). Ann. Paleont. Paris **39** 1953: 21-26 2 pls.

1158.—Palet y Barba, D. Nota paleontologica sobre el cuaternario del Valles. Mem. Comun. Inst. Geol. Dip. Prov. Barcelona **10** 1953: 79-80.

1159.—Pallie, W., Corner, G. W. and Weddell, G. Nerve terminations in the myometrium of the rabbit. Anat. Rec. **118** 1954: 789-811 12 figs.

1160.—Palmer, H. Late Pleistocene material from the Des Moines area. Proc. Iowa Acad. Sci. **60** 1954: 399-402 4 pls.

1161.—Palmer, H. A. A review of the Interstate Park, Wisconsin, bison find. Proc. Iowa Acad. Sci. **61** 1954: 313-319 2 pls.

1162.—Palmer, R. S. The Mammal Guide. Mammals of North America north of Mexico. New York (Double-day & Co.) 1954: 383 40 col. pls. figs.

1163.—Palmer, T. S. C. H. Merriam. Auk **71** 1954: 130-136 1 pl.

1164.—Panouse, J. B. Les Hamada Sud-Morocaines. Résultat de la Mission d'Etude 1951 de l'Institut Scientifique Chérifien et du Centre des Recherches Sahariennes. Zoologie I. Mammifères, oiseaux, reptiles, batraciens, myriapodes, crustacés, solifuges. Trav. Inst. sci. Chérifien. Sér. Gén. No. 2 1954: Mammals 173-174.

1165.—Papp, A. and Thenius, E. Vösendorf—ein Lebensbild aus dem Pannon des Wiener Beckens. Ein Beitrag zur Geologie und Paläontologie der unterpliozänen Congerischichten des südlichen Wiener Beckens. Mitt. Geol. Ges. Wien **46** 1954: 1-109 15 pls. [Mammals: 51-81.]

1166.—Paque, A. Coexistence d'une faune de toundra et d'outillage acheuléen dans les alluvions anciennes du plateau de Vassincourt (Meuse). C.R. Soc. Geol. France **6** 1954: 122-124.

1167.—Park, H. The heart and its vessels in some New World bats. Trans. Kansas Acad. Sci. **57** 1954: 197-199 4 figs.

Parke, W. N. see Penner.

Parkes, A. S. see Smith.

1168.—Parry, H. J. A comparative study of the umbilical sphincter. Proc. zool. Soc. Lond. **124** 1954: 595-604 3 pls. 3 figs.

Parsons, U. see Maqsood.

1169.—Pascual, R. Sobre nuevos restos de Sirenidos del Mesopotamiense. Rev. Asoc. Geol. Argentina **8** 1953: 163-181 2 pls. 1 fig.

1170.—Patchell, M. R. Direct effect of climate on cattle. I. Some observations on the skin temperature, body temperature, respiration rate and pulse rate of dairy stock under normal temperature conditions: 1-9. II. Measurements of skin temperature in cattle: 10-14. N.Z. J. Sci. Tech. **36A** 1 1954.

1171.—Patte, E. Remarques sur quelques Daims fossiles. Bull. Soc. Geol. France (6) **3** 1954: 657-665 3 figs.

1172.—Paulian, R. Une femelle mélanisante de *Propithecus Verreauxi coronatus*. Nat. Malgache **5** 1953: 105.

1173.—Paulian, P. Sur quelques variations de la date de mise bas de l'Eléphant de mer (*Mirounga leonina*). Mammalia, Paris **18** 1954: 375-379.

1174.—[Pavlovski, E. N. & Pervomaiski, G. S.] [Inheritance in change of coat in rabbits.] C.R. Acad. Sci. URSS n.s. **95** 1954: 653-656 1 col. pl. [In Russian.]

1175.—Pearson, O. P. Shrews. Sci. Amer. **191** 2 1954: 66-70 figs.

Pearson, P. B. see Van Reen.

1176.—Pearson, P. G. Mammals of Gulf Hammock, Levy County, Florida. Amer. midl. Nat. **51** 1954: 468-480 1 fig.

1177.—Pechtel, C. and Masserman, J. H. The osmotic responses of normal and neurotic monkeys. Ann. N.Y. Acad. Sci. **58** 1954: 256-260 1 fig.

1178.—Pedersen, A. Om moskusoksen og rensdyret på Grønland. *Nat. Verd.*, Kbh. 37 1953: 240-246.

Peters, E. *see* Vincke.

1179.—Penner, L. R. and Parke, W. N. Notoedric mange in the bobcat, *Lynx rufus*. *J. Mammal.* 35 1954: 458.

1180.—Penner, L. R. *Dirofilaria scapiceps* from snowshoe hare in Connecticut. *J. Mammal.* 35 1954: 458-459.

1181.—Penner, L. R. A note on *Macracanthorhynchus ingens* in a Connecticut raccoon. *J. Mammal.* 35 1954: 459.

1182.—Pepper, F. J. The epithelial repair of skin wounds in the guinea pig with special reference to the participation of melanocytes. *J. Morph.* 95 1954: 471-499 21 figs.

1183.—Perry, J. S. Some observations on growth and tusk weight in male and female African elephants. *Proc. zool. Soc. Lond.* 124 1954: 97-104 1 pl. 2 figs.

1184.—Perry, R. Red deer in Scotland. *Oryx* 2 1954: 246.

1185.—Perry, R. Red deer in Scotland. *Oryx* 2 1954: 392-393.

Pervomaïski, G. S. *see* Pavlovski.

1186.—Petelska, A. The levator scapulae muscle in man and in apes. *Folia morph.*, Warszawa 4 1953: 117-134 8 figs. [Polish with English rés.]

1187.—Petelski, M. The anthropomorphology of the suboccipital muscles. *Folia morph.*, Warszawa 4 1953: 135-170 24 figs. [Polish with English rés.]

1188.—Peterson, L. A. and Berg, E. D. Black-footed ferrets used in ceremonial objects by Montana Indians. *J. Mammal.* 35 1954: 593-594.

1189.—Peterson, R. L. Notes on the eastern distribution of *Eutamias minimus*. *Contr. R. Ont. Mus. Zool.* 37 1953: 1-4 1 fig.

1190.—Peterson, R. L. and Reynolds, J. K. Taxonomic status of the European hare in Ontario. *Contr. R. Ont. Mus. Zool.* 38 1954: 1-7 1 fig.

1191.—Petroniyevic, Z. M. Beiträge zur Kenntnis fossiler überreste Mastodontidea in Serbien. *Ann. Geol. Penin. Balkan.* 20 1952: 75-86 figs.

1192.—Petter, F. Note sur la systématique de quelques rongeurs désertiques. *Spec. Publ. res. Counc. Israel* No. 2 1953: 307-309.

1193.—Petter, F. La systématique des formes de la souris d'après E. et H. Schwarz. *Mammalia*, Paris 18 1954: 124-126.

1194.—Petter, F. Nouvelle note biologique sur le Hérisson du désert. *Mammalia*, Paris 18 1954: 220-221.

1195.—Petter, F. Remarques biologiques sur des rats épineux du genre *Acomys*. Répartition au Sahara. *Mammalia*, Paris 18 1954: 389-396 3 figs.

1196.—Petter, F. Méthode rapide de conservation des cadavres de petits Mammifères sur les lieux de collecte. *Mammalia*, Paris 18 1954: 422-423.

Petter, F. *see* Legoux.

Petter, F. *see* Vrydagh.

Petter, F. *see* Wisner.

1197.—Petter-Rousseaux, A. La périodicité sexuelle et les variations des genitalia femelles chez un Prosimien malgache, *Cheirogaleus major* (E. Geoffroy). *C.R. Acad. Sci. Paris* 239 1954: 1083-1085 4 figs.

1198.—Petzsch, H. Einige neue Beobachtungen an tauchenden Elbe-Bibern, *Castor fiber albus* Matschie, 1909, in Gefangenschaft. *Säugetierk. Mitt.* 2 1954: 79-80.

1199.—Petzsch, H. Über zwei jungsteinzeitliche Tierkleinplastiken-Bären- oder Schweinedarstellungen?—aus Ton von Scheiplitz/Stossen bei Weissenfels vom Standpunkt des Zoologen. *Wiss. Z. Martin-Luther Univ. Math. Nat. R.* 3 1954: 681-690 7 figs.

Philippot, E. *see* Gerebtzoff.

Phillips, D. S. M. *see* Bassett.

1200.—Phillips, R. J. S. Jimpy, a new totally sex-linked gene in the house mouse. *Z. indukt. Abstamm.-u. Vererb. Lehre* 86 1954: 322-326.

Phillips, R. J. S. *see* Carter.

1201.—Phillips, R. W. Dairy-cattle improvement in Asia and the Americas. *Proc. 7th Pac. Sci. Congr.* 6 1953: 209-223.

1202.—Phillips, W. W. A. Longevity of the Ceylon ruddy mongoose (*Herpestes smithi zeylanicus*) in captivity. *J. Bombay nat. Hist. Soc.* 52 1954: 587.

1203.—Phythian-Adams, E. G. Record sambar for the Nilgiris. J. Bombay nat. Hist. Soc. 52 1954: 588.

Pierce, R. A. *see* Gale.

1204.—Pieters, D. Deer from P. Panaitan. Penggemar Alam 34 1-2 1954: 25-35. [English summary.]

1205.—Pietsch, L. R. White-tailed deer populations in Illinois. Nat. Hist. Survey Div. Illinois, Biol. Notes 34 1954: 1-22 17 figs.

1206.—Pike, G. Whaling on the British Columbia coast. Proc. 7th Pacif. Sci. Congr. 4 1953: 370-373.

1207.—Pike, G. C. Whaling on the coast of British Columbia. Norsk Hvalfangsttid. 43 1954: 117-127 3 figs.

Pilgrim, A. F. *see* Gray.

1208.—Pilkington, R. Damaged antlers. Ctry. Life, Lond. 115 1954: 523 photo.

1209.—Pillai, N. G. Death of wild elephants, from suspected food-poisoning, in Travancore—Cochin State. J. Bombay nat. Hist. Soc. 52 1954: 206-207.

1210.—Pillay, B. S. Albino sambar. J. Bombay nat. Hist. Soc. 51 1954: 935.

1211.—Pilters, H. Untersuchungen über angeborene Verhaltensweisen bei Tylopoden, unter besonderer Berücksichtigung der neuweltlichen Formen. Z. Tierpsychol. 11 1954: 213-303 49 figs.

1212.—Pincher, M. C. The effect of low temperature on animals. Discovery 15 1954: 443-454 figs.

1213.—Pirlot, P. L. Pourcentages de jeunes et périodes de reproduction chez quelques Rongeurs du Congo Belge. Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool. 1 1954: 41-46.

1214.—Pirlot, P. Sobre la distribución de los *Hipparion*. Mem. Comun. Inst. Geol. Dip. Prov. Barcelona 10 1953: 81-82.

1215.—Pirlot, P. Recensement des populations animales, spécialement des mammifères. Proc. 3rd. Internat. Conf. Protect. Fauna & Flora Africa, Brussels [1954]: 384-387.

1216.—Pitman, C. R. S. African genets and mongooses. Zoo Life, Lond. 9 1954: 9-12 4 figs.

1217.—Pitman, C. R. S. The influence of the Belgian Congo on the distribution of Uganda's Primates and some of their characteristics. Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool. 1 1954: 47-55.

Pitman, C. R. S. *see* Hill.

1218.—Pitt, F. The future of Woburn. Field. 203 1954: 1172-1173 6 figs.

1219.—Pitt, F. North to the grey seal. Field. 204 1954: 830-831 5 figs.

1220.—Piveteau, J. L'homme et la singe de Piltown. Nature, Paris No. 3225 1954: 1-5 5 figs.

1221.—Pohle, M. Max Hilzheimer †, 1877-1946. Z. Säugetierk. 19 1954: 66-82 1 pl.

1222.—Polder, E. A check list of Mammals of present occurrence in Iowa with notes on new additions and distribution since 1937. Proc. Iowa Acad. Sci. 60 1954: 716-724.

1223.—Poll, M. Les animaux de la grande forêt congolaise. Nat. belges 34 1953: 84-104 map.

1224.—Poll, M. Manifestation d'homage H. Schouteden. Säugetierk. Mitt. 2 1954: 132 1 fig.

1225.—Ponsford, P. J. and Whyley, G. A. The golden hamster. J. med. Lab. Tech. 12 1954: 142-145.

1226.—Popović, V. L'hibernation artificielle du spermophile (*Citellus citellus*). Arch. biol. Nauk 4 1952: 37-43. [French résumé.]

Popović, V. *see* Vidovic.

1227.—[Ponugaeva, A. G.] [Olfactory analyzer and the grubbing activity of rodents in connection with food.] Zool. Zh., Moscow 33 1954: 869-875. [In Russian.]

Portenko, L. A. *see* Vinogradov.

1228.—Powell, T. P. S. and Cowan, W. M. The connexions of the midline and intralaminar nuclei of the thalamus of the rat. J. Anat., Lond. 88 1954: 307-319 3 pls. 6 figs.

1229.—Powell, T. P. S. and Cowan, W. M. The origin of the mamillo-thalamic tract in the rat. J. Anat., Lond. 88 1954: 489-497 1 pl. 5 figs.

1230.—Power, J. M. Panther killed by domestic buffaloes. J. Bombay nat. Hist. Soc. 52 1954: 201.



1231.—[Poyarkov, V. S.] [Bio-technical measures for increasing productivity in beaver inhabited reserves of Voronezh game reserve.] Nasimovich A.A., Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 46-64 9 figs. [In Russian.]

Pracy, L. *see* Kean.

1232.—Prakash, I. Swimming and locomotion of captive hedgehogs. J. Bombay nat. hist. Soc. 52 1954: 584-585.

1233.—Prasad, M. R. N. Natural History of the South Indian Gerbille *Tatera indica cuvieri* (Waterhouse). J. Bombay nat. Hist. Soc. 52 1954: 184-189.

1234.—Prasad, M. R. N. Food of the Indian gerbille *Tatera indica cuvieri* (Waterhouse). J. Bombay nat. Hist. Soc. 52 1954: 321-325 1 histogram.

1235.—Prasad, M. R. N. The male genital tract of two genera of Indian squirrels. J. Mammal. 35 1954: 471-485 1 pl. 4 figs.

1236.—Precht, H. and Lindenlaub, E. Über das Heimfindevermögen von Säugetieren. I. Versuche an Katzen. Z. Tierpsychol. 11 1954: 485-494 2 figs.

1237.—Prell, H. Gehörnte Esel, gehörnte Schweine und gehörnte Hyänen im klassischen Altertum. Z. Säugetierk. 19 1954: 108-116.

1238.—Prell, H. Gehörnte Hyänen an indischen Fürstenhöfen. (Ein Beitrag zur Tierkunde des Altertumes). Rec. Indian Mus. 51 1954: 67-109.

1239.—Preuss, F. Die Tunica albuginea penis und ihre Trabekel bei Pferd und Rind. Anat. Anz. 101 1954: 64-83 9 figs.

1240.—Prigogine, A. Deux nouvelles races d'*Aethosciurus ruwenzorii* Schwann du Congo Belge. Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool. 1 1954: 69-73 1 fig.

1241.—Pruitt, W. O. Aging in the masked shrew *Sorex cinereus cinereus* Kerr. J. Mammal. 35 1954: 35-39 1 fig.

1242.—Pruitt, W. O. Notes on a litter of young masked shrews. J. Mammal. 35 1954: 109-110.

1243.—Pruitt, W. O. Rutting behaviour of the whitetail deer (*Odocoileus virginianus*). J. Mammal. 35 1954: 129-130.

1244.—Pruitt, W. O. Notes on Colorado *Phenacomys* and pikas. J. Mammal. 35 1954: 450-452.

1245.—Pruitt, W. O. Notes on the shorttail shrew (*Blarina brevicauda kirtlandi*) in Northern Lower Michigan. Amer. Midl. Nat. 52 1954: 236-241.

1246.—Pruitt, W. O. Additional animal remains from under Sleeping Bear Dune, Leelanau County, Michigan. Pap. Mich. Acad. Sci. 39 1954: 253-256.

Pryakhin, V. A. *see* Kalabukhov.

Purves, P. E. *see* Fraser.

1247.—Quartier, A. A. Quelques remarques au sujet des chevreuils du Jura. Mammalia, Paris 18 1954: 380-388 1 fig.

1248.—Quast, J. C. Rodent habitat preferences on foothill pastures in California. J. Mammal. 35 1954: 515-521.

1249.—Quay, W. B. The Meibomian glands of voles and lemmings (*Microtinae*). Misc. Publ. Mus. Zool. Univ. Mich. No. 82 1954: 1-17 3 pls. 3 figs.

1250.—Quay, W. B. The anatomy of the diastemal palate in microtine rodents. Misc. Publ. Mus. Zool. Univ. Mich. No. 86 1954: 1-41 4 pls. 12 figs.

1251.—Quay, W. B. The blood cells of Cetacea with particular reference to the Beluga *Delphinapterus leucas* Pallas, 1776. Säugetierk. Mitt. 2 1954: 49-54 3 figs.

1252.—Quay, W. B. The dorsal holocrine skin gland of the kangaroo rat (*Dipodomys*). Anat. Rec. 119 1954: 161-175 8 figs.

1253.—Quay, W. B. and Reeder, W. G. The hemorrhagic and hemopoietic nodules in the alar and interfemoral membranes of *Pizonyx vivax* (Chiroptera). J. Morph. 94 1954: 439-471 22 figs.

1254.—Rainey, D. G. and Stains, H. J. Early seasonal record of the red bat in Kansas. Trans. Kansas Acad. Sci. 57 1954: 85.

1255.—[Rall, Y. M. and Karaerova, G. P.] [New data on distribution and damage caused by *Scirtopoda telum* in Rostov province.] Zool. Zh., Moscow 33 1954: 1184-1185. [In Russian.]

- 1256.—[Rall, Y. M., Kiyanova, V. S. and Strelina, T. D.] [Observations on rodents in the irrigation area of Rostov Province.] Zool. Zh., Moscow **33** 1954: 1390-1395 2 figs. [In Russian.]
- 1257.—Rammner, W. Beobachtungen an einem Feldhasen in der Grossstadtwohnung. Zool. Gart., Lpz. 20 1954: 282-293.
- 1258.—Rankin, J. An interesting whale. Nat. Hist. Notes nat. Hist. Soc. Jamaica No. 64 1954: 51-54 figs.
- 1259.—Rankin, J. J. An investigation of the innervation of the thymus gland of the common mouse, *Mus musculus*. Quart. J. micr. sci. **95** 1954: 217-230 2 pls. 2 figs.
- 1260.—Rappaport, A. M. and others. Subdivision of hexagonal liver lobules into a structural and functional unit. Anat. Rec. **119** 1954: 11-33 11 figs.
- 1261.—[Raskatov, G. I.] [Problems concerning Quaternary fauna, flora and paleolithic of eastern Carpathians, Pre-Carpathians and Trans-Carpathians.] Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.S.S.R.) **18** 1953: 64-75. [In Russian.]
- 1262.—Kausch, R. On the land mammals of St. Lawrence Island, Alaska. Murrelet **34** 1953: 18-26.
- 1263.—Rayment, T. Australia's Bandicoots. Vict. Nat., Melb. **70** 1954: 194-196 1 pl.
- 1264.—Raynaud, A. and A. Transformation sous l'influence d'une hormone oestrogène, des ébauches mammaires à cordon primaire unique, du fœtus de Souris, en ébauches à bourgeons multiples ou à deux cordons mammaires primaires. C.R. Acad. Sci. Paris **239** 1954: 191-193 1 fig.
- 1265.—Raynaud, A. and A. Essai d'interprétation du mode de formation des ébauches mammaires à bourgeons multiples ou à deux cordons mammaires, chez le fœtus de souris traités par une hormone oestrogène. C.R. Acad. Sci. Paris **239** 1954: 315-317 10 figs.
- 1266.—Reed, C. A. Some fossilorial mammals from the Tertiary of western North America. J. Paleont. **28** 1954: 102-111 8 figs.
- 1267.—Reed, C. A. Identity of the Pleistocene mole from Gibraltar. J. Mammal. **35** 1954: 583.
- 1268.—Reeder, W. G. and Norris, K. S. Distribution, type locality, and habits of the fish-eating bat, *Pizonyx vivax*. J. Mammal. **35** 1954: 81-87 1 pl. 1 fig.
- Reeder, W. G. see Quay.
- 1269.—Reinwaldt, E. Storre skogsmusen (*Apodemus flavicollis* Melch.) på Gotland. Fauna og Flora **49** 1954: 254-256 1 fig.
- 1270.—Reith, C. Problems of a rabbit population. Ctry. Life, Lond. **116** 1954: 1497-1498.
- 1271.—Remane, A. Structure and relationships of *Megathropus africanus*. Amer. J. Phys. Anthropol. **12** 1954: 123-129 3 figs.
- 1272.—Rendel, J. M. White heifer disease in a herd of dairy shorthorns. J. Genet. **51** 1952: 89-94.
- 1273.—Rendel, J. M. The use of regressions to increase heritability. Aust. J. biol. Sci. **7** 1954: 368-378 5 figs.
- 1274.—Rensch, B. and Altevogt, R. Zählung und Dressurleistungen indischer Arbeitselefanten. Z. Tierpsychol. **11** 1954: 497-510 16 figs.
- 1275.—Reventlow, A. Remarks on American black bears. Zool. Gart., Lpz. **20** 1953: 185-186.
- 1276.—Reventlow, A. The kodiak bear cub "Ursula." Zool. Gart., Lpz. **20** 1954: 279-282 2 figs.
- Rewell, R. E. see Osman Hill.
- 1277.—Reynolds, H. C. The opossum. Sci. Amer. **188** 6 1953: 88-94 figs.
- 1278.—Reynolds, J. The epidermal melanocytes of mice. J. Anat., Lond. **88** 1954: 45-58 2 pls. 2 figs.
- Reynolds, J. K. see Peterson.
- Rhine, R. J. see Littmann.
- 1279.—Rhode, C. E. When giant bears go fishing. Nat. geogr. Mag. **106** 1954: 195-206 figs.
- 1280.—Richard, C. Il Ghro gigante del Pleistocene di Sicilia (*Leithia melitensis* Leith Adams.) Palaeont. Ital. **44** 3 1954: 1-53 3 pls. 5 figs.
- 1281.—Richard, L. Observations complémentaires faites sur la dentition d'une tête osseuse de zèbre, *Equus* (*Pseudogagga*) *boekmi* cf. *zambeziensis* Prazak ♀ du Muséum d'Histoire naturelle de Rouen. Mammalia, Paris **18** 1954: 397-403 1 fig.

1282.—Richardson, F. Nevada mammal records. *J. Mammal.* **35** 1954: 578–579.

1283.—Richardson, K. C. and Folley, S. J. Synthetic activity of a single epithelial cell of the lactating goat udder. *Nature, Lond.* **174** 1954: 828–829.

1284.—Richter, C. P. Domestication of the Norway rat and its implication for the study of genetics in man. *Amer. J. Human Genet.* **4** 1952: 273–285.

1285.—Richter, C. P. and Mosier, H. D. Maximum sodium chloride intake and thirst in domesticated and wild Norway rats. *Amer. J. Physiol.* **176** 1954: 213–222.

1286.—Richter, H. Zur Kenntnis mittelsächsischer Soriciden. *Z. Säugetierk.* **18** 1953: 171–181 1 fig.

1287.—Rieck, W. Die Bestände des Muffelwildes, *Ovis musimon* Pallas, 1811, im Bundesgebiet. *Säugetierk. Mitt.* **2** 1954: 54–60 1 fig.

1288.—Riedel, A. Resti di animali olocenici rinvenuti presso Oderso (Treviso). *Bol. Soc. venez. Stor. nat.* **5** 1950: 72–75 1 pl.

1289.—Rifaat, O. A revised map of the fifth chromosome of the domestic rabbit. *Heredity* **8** 1954: 107–117.

1290.—Rifaat, O. M. White spotting in mice and rabbits. *Genetica* **27** 1954: 286–292.

1291.—Riney, T. Antler growth and shedding in a captive group of fallow deer (*Dama dama*) in New Zealand. *Trans. roy. Soc. N.Z.* **82** 1954: 569–578 4 figs.

Rinjard, J. *see* Urbain.

1292.—Rinker, G. C. The comparative myology of the mammalian genera *Sigmodon*, *Oryzomys*, *Neotoma*, and *Peromyscus* (Cricetinae), with remarks on their intergeneric relationships. *Misc. Publ. Zool. Univ. Mich. No. 83* 1954: 1–124 18 figs.

Ripley, S. D. *see* Hutchinson.

1293.—Ritchie, J. N., Hudson, J. R. and Thompson, H. V. Myxomatosis. *Vet. Rec.* **66** 1954: 796–804.

Rivero, L. H. *see* Aguayo.

1294.—Robertson, R. A. and Shadle, A. R. Osteologic criteria of age in beavers. *J. Mammal.* **35** 1954: 197–203 1 fig.

1295.—Robins, J. P. Ovulation and pregnancy corporea lutea in the ovaries of the humpback whale. *Nature, Lond.* **173** 1954: 201–203 4 figs.

1296.—Robinson, C. S. and Crone-miller, F. P. Notes on the habitat of the desert bighorn in the San Gabriel Mountains of California. *Calif. Fish. Game* **40** 1954: 267–271 1 fig.

1297.—Robinson, D. J. and Cowan, I. McT. An introduced population of the Gray Squirrel (*Sciurus carolinensis* Gmelin) in British Columbia. *Canad. J. Zool.* **32** 1954: 261–282.

1298.—Robinson, J. T. The Australopithecine occiput. *Nature, Lond.* **174** 1954: 262–263.

1299.—Robinson, J. T. Nuchal crests in Australopithecines. *Nature, Lond.* **174** 1954: 1197–1198.

1300.—Robinson, J. T. Prehominid dentition and hominid evolution. *Evolution* **8** 1954: 324–334 3 figs.

1301.—Robinson, J. T. The genera and species of the Australopithecinae. *Amer. J. Phys. Anthropol.* **12** 1954: 181–200 7 figs.

1302.—Robinson, K. W. Heat tolerance of Australian monotremes and marsupials. *Aust. J. biol. Sci.* **7** 1954: 348–360 1 fig.

Roche, E. T. *see* Mayer.

1303.—Roche, J. Préparation des pièces ostéologiques. *Mammalia, Paris* **18** 1954: 420–422.

1304.—Rodeck, H. G. Uniformity of common names of mammals. *J. Mammal.* **35** 1954: 142–144.

1305.—Rodhain, J. Le *Thamnomys surdaster surdaster*, animal de laboratoire. *Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool.* **1** 74–76 1 fig.

1306.—Roding, G. M. Een reconstructie op ware grootte van de wolharige neushoorn (*Coelodonta antiquitatis* Blumenbach). *Levende Nat.* **57** 1954: 51–54 2 figs.

1307.—Rokitansky, G. von. Zweiter Fundnachweis von *Myotis bechsteini* (Leisler, 1818) für Österreich. *Säugetierk. Mitt.* **2** 1954: 128.

1308.—Rollinson, D. H. L. A study of the distribution of acid and alkaline phosphatase in the genital tract of the Zebu bull (*Bos indicus*). *J. agric. Sci.* 45 1954: 173-178 2 pls.

Rollinson, D. H. L. *see* Harker.

1309.—Roonwal, M. L. Correct name, authorship and date of Blyth's Vole, *Pitymys* (*Phaiomys*) *leucurus* Blyth, occurring in Ladak, Kashmir. (Mammalia, Rodentia, family Muridae). *J. zool. Soc. India* 5 1953: 41-43.

1310.—Rosen, M. D. and Sarnat, B. G. A comparison of the volume of the left and right maxillary sinuses in dogs. *Anat. Rec.* 120 1954: 65-71 4 figs.

1311.—Rosenfeld, G. and Hoehne, L. Studies on comparative hematology—I. Hematologic data of *Myrmecophaga t. tridactyla* L. 1758 (Tamandua-Bau-deira) and *Tamandua t. tetradactyla* L., 1758 (Tamandua-Mirim). *Mem. Inst. Butantan* 25 1953: 41-51 14 figs.

1312.—Rosenfeld, G. and Hoehne, L. Estudos de hematologia comparada. III. Dados hemametricos do cão domestico. *Mem. Inst. Butantan* 25 1954: 67-76.

Rosenfeld, G. *see* Hoehne.

1313.—Rosevear, D. R. Extension of range of the angwantibo. *Nature, Lond.* 174 1954: 190.

Rosicky, B. *see* Kratochvil.

1314.—[Roskin, G. I.] [The erythrocytes of man and mammals.] *Adv. mod. Biol., Moscow* 37 1954: 325-340 6 figs. [In Russian.]

Rossiter, R. J. *see* Mannell.

1315.—Rothschild, Lord and Barnes, H. Constituents of bull seminal plasma. *J. exp. Biol.* 31 1954: 561-572 2 figs.

1316.—Rotter, P. Notes on the mammal fauna of the Palestinian coastal region and surroundings. *Bull. Mus. Hist. nat. Serbe (B)* Nos. 5-6 1953: 487-492. [English summary.]

Rowson, L. E. A. *see* Beatty.

Rowson, L. E. *see* Hunter.

1317.—Rudel, A. La faune quaternaire des terrasses de l'allier a Pont-du-Chateau. *Rev. Sci. nat. Auvergne N.S.* Nos. 1-2 1953: 43-47.

Rugani, F. *see* Grazi.

1318.—Runner, M. N. and Gates, A. Conception in prepuberal mice following artificially induced ovulation and mating. *Nature, Lond.* 174 1954: 222-223.

1319.—Rusconi, C. Las piezas "Tipos" del Museo de Mendoza. *Rev. Mus. Hist. nat. Mendoza* 7 1954: 82-155. [Mammals: 137-139.]

Rushby, G. G. *see* Hill.

1320.—Ruska, H. Elektronenmikroskopischer Beitrag zur Histologie des Skelettmuskels kleiner Säugetiere. *Z. Naturf.* 9B 5 1954: 358-371 28 figs.

Russell, E. S. *see* Coulombre.

1321.—Russell, L. S. Evidence of tooth structure on the relationships of the early groups of Carnivora. *Evolution* 8 1954: 166-171 7 figs.

1322.—Russell, L. S. Mammalian fauna of the Kishenehn Formation, Southeastern British Columbia. *Bull. nat. Mus. Can. No.* 132 1954: 92-109 2 pls. 17 figs.

1323.—Russell, R. J. A multiple catch of *Cratogeomys*. *J. Mammal.* 35 1954: 121-122.

1324.—Russell, R. J. and Findley, J. S. Swimming ability of the grasshopper mouse. *J. Mammal.* 35 1954: 118-119.

Russell, R. J. *see* Davis.

1325.—Russell, Sir T. Desert fauna. *Bull. zool. Soc. Egypt No.* 8 1949: 5-8.

1326.—Ruth, F. S. Wolverine seen in Squaw Valley, California. *J. Mammal.* 35 1954: 594-595.

1327.—Rutherford, W. H. A record of the ringtail (*Bassariscus astutus*) in Colorado. *J. Mammal.* 35 1954: 442-443.

1328.—Ruud, J. T. Observations on the use of size limits in the regulation of whaling. *Norsk Hvalfangsttid.* 43 1954: 192-198.

1329.—Ruud, J. T. and Øynes, P. International co-operation in whale marking: the second period of the voyage of the "Enern" to the Antarctic 1953, and the trials with whale marks conducted on board floating factories in the season 1954. *Norsk Hvalfangsttid.* 43 1954: 383-393 1 fig.

Ruud, J. T. *see* Clarke.



1330.—Ryckman, R. E., Fisher, K. C. and Ames, C. T. An apparatus for collection of ecto-parasites from mammals. *Calif. Fish Game* 40 1954: 75-76 1 fig.

Ryser, F. A. *see* Morrison.

1331.—Ryziewicz, Z. Restes du bœuf musqué fossile (*Ovibos pallantis* Ham. Smith) de la sablière près de Milowice en Haute Silesie. *C.R. Soc. Sci. Wrocław* 3 1953: 95.

1332.—Ryziewicz, Z. Research on fossil musk-oxen from the area of Poland. *Bull. Inst. Geol. Warsaw* 5 1954: 177-252 20 pls. [Polish with English summary.]

1333.—Saban, R. Phylogénie des Insectivores. *Bull. Mus. Hist. nat., Paris* 26 (2) 1954: 419-432.

1334.—Sachs, L. The chromosomal constancy of the normal mammalian uterus. *Heredity* 8 1954: 117-124.

1335.—Sage, B. L. The slow worm and the red squirrel in south Hertfordshire. *Trans. Herts. Nat. Hist. Soc.* 24 1954: 78.

1336.—Sanborn, C. C. April record of silver-haired bat in Oregon. *Murrelet* 34 1953: 32.

1337.—Sanborn, C. C. Mammals from the Departments of Cuzco and Puno, Peru. *Publ. Mus. Hist. Nat. "Javier Prado," Lima, Zool. (A) No. 12* 1953: 1-8.

1338.—Sanborn, C. C. Mammals from Mindanao, Philippine Islands, collected by the Danish Philippine Expedition 1951-1952. *Vidensk. Medd. dansk naturh. Foren. Kbh.* 115 1953: 283-288 1 pl.

1339.—Sanborn, C. C. Bats from Chimantá-Tepui with remarks on *Choeironiscus*. *Fieldiana Zool.* 34 1954: 289-293.

1340.—Sanborn, C. C. Weights, measurements and color of the Chilean forest puma. *J. Mammal.* 35 1954: 126-128.

1341.—Sanborn, C. C. Bats of the United States. *Pub. Health Rep.* 69 1954: 17-28 16 figs.

1342.—Sanderson, G. C. Recent status of the Beaver in Iowa. *Proc. Iowa Acad. Sci.* 60 1954: 746-753 1 fig.

1343.—Sanderson, G. C. and Speaker, E. B. Results of Iowa's first deer season in recent years. *Proc. Iowa Acad. Sci.* 61 1954: 615-630 2 figs.

Santapau, S. J. *see* Ali.

1344.—Santiago Carrara, I. Observaciones sobre el estado actual de las poblaciones de Pinnipedos de la Argentina. *Eva Peron, Argentina* 1954: 1-16 illust.

1345.—Sarajas, H. S. S. Observations on the electrocardiographic alterations in the hibernating hedgehog. *Acta Physiol. scand.* 32 1954: 28-38 3 figs.

Sarnat, B. G. *see* Rosen.

1346.—Sather, J. H. The dentition method of aging muskrats. *Nat. Hist. Misc. No. 130* 1954: 1-3 2 figs.

1347.—Sather, S. H. The life history, habits and economic status of the Great Plains muskrat. *Abstr. doct. Diss. Univ. Neb.* 1953 1953: 297-299.

Sato, T. *see* Sugiyama.

Sattee, V. S. *see* Sharma.

1348.—Satyamurti, S. T. The Chinkara or Indian gazelle. *Bull. Pr. Wales Mus. W. India No. 3* 1954: 82-84 1 pl.

1349.—Sauerzopf, F. Liste der bisher im Burgenland aufgefundenen freilebenden Säugetiere. *Burgenland. Heimatblatt.* 16 1954: 8-14.

1350.—Scharlemann, E. Materialien zur Kenntnis und zur Erhaltung des ukrain. Bibers. *Z. Säugetierk.* 18 1953: 146-162.

1351.—Scharrer, E. Neurosecretion and anterior pituitary in the dog. *Experientia* 10 1954: 264-266.

1352.—Schaub, S. La trigonodontie des rongeurs simplicités. *Ann. Paleont., Paris* 39 1953: 29-31 57 figs.

1353.—Scheffer, V. B. Measurements and stomach contents of eleven Delphinids. *Murrelet* 34 1953: 27-30 1 fig.

1354.—Scheffer, V. B. Conserving the Alaska fur seals. *Proc. 7th Pacif. sci. Congr.* 4 1953: 615-620.

Scheffer, V. B. *see* Kenyon.

1355.—Schevill, W. E. Sight records of the grey grampus, *Grampus griseus* (Cuvier). *J. Mammal.* 35 1954: 123-124.

Schevill, W. E. *see* Lawrence.

1356.—Schiller, E. L. Unusual walrus mortality on St. Lawrence Island, Alaska. *J. Mammal.* **35** 1954: 203–210 1 pl. 1 fig.

1357.—Schmidt, F. Beobachtungen bei der Aufzucht von Hermelinen, *Mustela erminea aestiva* Kerr, 1792. *Säugetierk. Mitt.* **2** 1954: 166–174 3 figs.

1358.—Schmidt, P. Über den Wert der Bekämpfung der Feldmaus. Neue Ergebnisse der Erforschung von Mäusekalamitäten. *Schweiz. Naturschutz* **20** 1954: 33–38 1 fig.

1359.—Schmidt, W. J. and Sprankel, H. Bildet sich im Stratum corneum des Rinderhornes Röhrenstruktur aus? *Z. Morph. Ökol.* **42** 1954: 449–470 16 figs.

1360.—Schmidt-Nielsen, B. Water conservation in small desert rodents. *Biology of Deserts*, Lond. 1954: 173–181 5 figs.

1361.—Schmidt-Nielsen, K. Heat regulation in small and large desert mammals. *Biology of Deserts*, Lond. 1954: 182–187 3 figs.

1362.—Schneider, K. M. Von der Fleckung junger Löwen. *Zool. Gart.*, Lpz. **20** 1953: 127–150 33 figs.

1363.—Schneider, K. M. Dr. Oskar Heinroth †, 1871–1945. *Z. Säugetierk.* **19** 1954: 57–65 1 pl.

1364.—Schnorfi, A. Un crâne de *Bison priscus*. *Bull. Labs. Univ. Lausanne* No. 112 1954: 5–6 1 pl.

1365.—Schnorfi, A. Sur deux Elans trouvés dans des tourbières. *Bull. Soc. vaud. Sci. nat.* **66** 1954: 55–58 2 figs.

1366.—Schnorfi, A. Un crâne de *Bison priscus*. *Bull. Soc. vaud. Sci. nat.* **66** 1954: 59–61 3 figs.

1367.—Schnorfi, A. Sur deux Elans trouvés dans des tourbières. *Bull. Labs. Univ. Lausanne* No. 112 1954: 1–4 2 figs.

Schnorrenberg, B. see Schua.

1368.—Schorger, A. W. The elk in early Wisconsin. *Trans. Wisconsin Acad. Sci.* **43** 1954: 5–23 1 fig.

1369.—Schua, L. and Schnorrenberg, B. Beobachtungen über das Auftreten von Winterschlaf bei Goldhamstern, *Mesocricetus auratus* (Waterhouse, 1839) und über gewisse Wetterabhängigkeit derselben. *Säugetierk. Mitt.* **2** 1954: 163–166.

1370.—Schubel, A. Ein Beitrag zur Morphologie des Wolfsschädels. *Wiss. Z. Univ. Greifswald. Math.-Nat. R.* **3** 1954: 439–456 8 figs.

1371.—Schultz, A. H. Bemerkungen zur Variabilität und Systematik der Schimpansen. *Säugetierk. Mitt.* **2** 1954: 159–163 3 figs.

1372.—Schultz, A. H. Studien über die Wirbelzahlen und die Körperproportionen von Halbaffen. *Vjschr. naturf. Ges. Zürich* **99** 1954: 39–75 5 figs.

1373.—Schultz, C. B. and Falkenbach, C. H. Desmatochoerinae, a new subfamily of Oreodonts. Contribution to the revision of the Oreodonts (Merycoidodontidae), No. 6. *Bull. Amer. Mus. Nat. Hist.* **105** 1954: 143–256 25 figs.

Schultz, L. C. see Cohrs.

1374.—Schultz, V. Status of the spotted skunk, common skunk and woodchuck in Tennessee. *J. Tenn. Acad. Sci.* **29** 1954: 305–314 2 figs.

1375.—Schultz, V. Status of the bobcat in Tennessee. *J. Tenn. Acad. Sci.* **29** 1954: 66–72 1 fig.

1376.—Schultz, V. Status of the beaver and otter in Tennessee. *J. Tenn. Acad. Sci.* **29** 1954: 73–81.

1377.—Schulze, W. Einige interessante Krankheitsfälle bei Bären. *Zool. Gart.*, Lpz. **20** 1953: 101–108 2 figs.

1378.—Schütz, H. Das Verhalten des Hodens und Nebenhodens beim Igel (*Erinac. europ. et rom. L.*) während des Oestrus. *Anat. Anz.* **101** 1954: 84–94.

1379.—Schwangart, F. Übersicht und Beschreibung der Hauskatzenrassen (Standards). *Z. Säugetierk.* **20** 1954: 1–12 3 pls. 1 fig.

1380.—Schwartz, A. Observations on the Big Pine Key cotton rat. *J. Mammal.* **35** 1954: 260–263.

1381.—Schwartz, A. Oldfield mice, *Peromyscus polionotus* of South Carolina. *J. Mammal.* **35** 1954: 561–569.

1382.—Schwartz, A. A second record of *Myotis subulatus leibi* in North Carolina. *J. Elisha Mitchell Sci. Soc.* **70** 1954: 222.

1383.—Schwarz, E. Miscellaneous records of African primates. *Rev. zool. Bot. Afr.* **49** 1954: 328-336.

1384.—Schwarze, E. and Hoffmann, G. Beiträge zur Anatomie des Sumpfbibers (*Myocastor coypus* Mol.). 2. Das Skelett des Beckengürtels. *Zool. Anz., Lpz.* **153** 1954: 288-292 5 figs.

1385.—Schwetz, J. Sur quelques rongeurs sauvages et une musaraigne du Congo, hôtes naturels de deux schistosomes. *Bull. Inst. colon. belge* **24** 1953: 1452-1463 10 figs.

1386.—Schwetz, J. Sur quelques rongeurs sauvages du Katanga. *Zooleo No.* **27** 1954: 415-420 figs.

Scott, P. M. *see* Gale.

1387.—Sealander, G. A. New mammal records for Arkansas. *J. Mammal.* **35** 1954: 430.

1388.—Sealander, J. A. and Hoiberg, A. J. Occurrence of the Seminole bat in Arkansas. *J. Mammal.* **35** 1954: 584.

1389.—Sealander, J. A. and Leonard, R. G. Use of crayfish for cleaning skeletal material. *J. Mammal.* **35** 1954: 428-429.

1390.—Searle, A. G. Inherited macrocytic anaemias of the house mouse. IV. The alleviating effect of blood injections. *J. Genet.* **51** 1952: 187-190 1 fig.

1391.—Searle, A. G. Genetical studies on the skeleton of the mouse. IX. Causes of skeletal variation within pure lines. X. Rarer variants in the A and C57BL pure lines. *J. Genet.* **52** 1954: 68-102 15 figs, 103-110 10 figs.

1392.—Searle, A. G. Genetical studies on the skeleton of the mouse. XI. The influence of diet on variation within pure lines. *J. Genet.* **52** 1954: 413-424 4 figs.

1393.—Searle, A. G. The influence of maternal age on development of the skeleton of the mouse. *Ann. N.Y. Acad. Sci.* **57** 1954: 558-563 2 figs.

Seite, R. *see* Stahl.

1394.—Senyurek, M. S. A study of the pulp cavities and roots of the lower premolars and molars of Prosimii, Ceboidea and Cercopithecoidea. *Bulleten, Ankara* **17** 1953: 321-365 56 figs.

1395.—Senyurek, M. S. List of mammalian fossils of Pontian age in the Vilayet of Kayseri. *Rev. Fac. Lang. Hist. Geogr. Univ. Ankara* **11** 1953: 171-176 10 figs.

1396.—Senyurek, S. A study of the remains of *Samotherium* found at Taskinpassa. *Rev. Fac. Lang. Hist. Geogr. Univ. Ankara* **12** 1954: 1-2, 1-32 10 figs.

1397.—Sera, G. L. La posizione zoologica del genere mammale miocenico *Desmostylus*. *Arch. zool. ital. Napoli* **38** 1954: 485-506 4 figs.

1398.—Sera, G. L. Posizione zoologica dei Pyrotherii. *Monit. zool. ital.* **62** 1954: 42-44.

1399.—Sera, G. L. I modi di vita degli Astrapotherii. *Riv. Ital. Paleont. Strat., Milano* **60** 1954: 13-20 1 fig.

1400.—Sergi, S. I profanerantropi di Swanscombe e di Fontchevade. *Riv. anthrop.* **40** 1953: 65-72 3 pls. 2 figs. [English summary.]

1401.—Serventy, D. L. and others. The recent increase of the rarer native mammals. *W. Aust. Nat.* **4** 1954: 128-141.

1402.—Setzer, H. W. A new squirrel from the Anglo-Egyptian Sudan. *Proc. biol. Soc. Wash.* **67** 1954: 87-88.

1403.—Seymour, G. D. Recent extension of the range of muskrats in California. *Calif. Fish Game* **40** 1954: 375-384 4 figs. \*

1404.—Shadle, A. R. Natural parturition of a porcupine and the first reactions of the porcupette. *Ohio J. Sci.* **54** 1954: 42-44.

1405.—Shadle, A. R. The well-armed porcupine. *Anim. Kingd.* **57** 1954: 130-137 5 figs.

1406.—Shadle, A. R. Sizes of wood cuttings handled by beavers. *Amer. Midl. Nat.* **52** 1954: 510-512.

Shadle, A. R. *see* Robertson.

Shafei, M. M. *see* Hafez.

1407.—Shamel, H. H. and others. Gerrit Smith Miller, Jr. *J. Mammal.* **35** 1954: 317-329 1 pl.

1408.—Shaner, R. F. Malformations of the truncus arteriosus in pig embryos. *Anat. Rec.* **118** 1954: 539-560 35 figs.

1409.—[Shaposhnikov, F. D.] [Winter food of Siberian stag in the mountains of eastern Altai.] Nasimovich, A. A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 97-100 fig. [In Russian.]

1410.—Sharaf, A. The hormonal factor in sexual activity. Bull. zool. Soc. Egypt No. 11 1953: 31-36.

1411.—Sharma, G. P., Chaudhuri, G. C. & Sattre, V. S. The guinea-pig sperm. Res. Bull. E. Panjab Univ. No. 38 1953: 157-180 3 pls.

Sharman, G. see Moir.

1412.—Sharman, G. B. Reproduction in marsupials. Nature, Lond. 173 1954: 302-303.

1413.—Sharman, G. B. The relationships of the Quokka (*Setonix brachyurus*). W. Aust. Nat. 4 1954: 159-168 3 figs.

1414.—Shelford, V. E. The antelope population and solar radiation. J. Mammal. 35 1954: 533-538 4 figs.

1415.—Shenton, J. B. Oddities from the Luangwa Valley. Afr. Wild Life 3 1954: 201-204 4 figs.

1416.—[Shepeleva, V. K.] [Some data on colour perception in dog.] C.R. Acad. Sci. URSS n.s. 96 1954: 1277-1280 2 diagrams. [In Russian.]

1417.—Sherman, H. B. Raccoons of the Bahama Islands. J. Mammal. 35 1954: 126.

1418.—Sherman, H. B. The occurrence of bison in Florida. Quart. J. Florida Acad. Sci. 17 1954: 228-232 1 fig.

1419.—Shikama, T. A handbook of illustrated fossils from Japanese and their related Territories. Kyôto, 1952. 1952: 279-287 pls. 34, 41, 42, 45, 46, 56-7, text-figs. 67-71.

1420.—Shikama, T. On a fossil remain of sea lion, *Eumetopias* (?) *kishidai* n.sp. from Japan. Sci. Rep. Yokohama Univ. Sect. II No. 2 1953: 10-14 1 pl. 2 figs.

1421.—[Shilov, I. A.] [Influence of spring flood on fluctuations in the numbers of water-rats.] Zool. Zh., Moscow 33 1954: 1396-1402. [In Russian.]

Shilov, M. N. see Krilova.

Shilov, M. N. see Varshavski.

Shilova, E. S. see Krilova.

Shorland, F. B. see Hartman.

1422.—Shorten, M. Squirrels. London (New Naturalist, Collins) 1954: xii + 212 15 pls. maps.

1423.—Shout, T. Arch-enemy of ground birds. The hedgehog. For. & Bird No. 114 1954: 7.

1424.—Siegler, H. R. Late-breeding snowshoe hare. J. Mammal. 35 1954: 122.

1425.—Siivonen, L. Über die Grössenvariation der Säugetiere und die *Sorex macropygmaeus* Mill. Frage in Fennoskandien. Ann. Acad. Sci. fenn. 4A 21 1954: 1-24 2 figs.

1426.—Siivonen, L. Nisäkästäntömuksen perusedellytyksistä. Suonnen Tutk. 58 1954: 12-16 6 figs.

1427.—Simon, E. Vordere und mittlere Schädelgrube bei Laboratoriums und Haussäugetieren. Acta anat. 22 97-127 12 figs.

1428.—Simpson, G. G. Horses and evolution. Rep. Aust. Ass. Advanc. Sci. 28 [1952]: 160-165.

1429.—Simpson, G. G. Evolution and geography. An essay on historical biogeography, with special reference to mammals. Eugene, (Oregon State System of Higher Education), 1953: pp. 64 30 figs.

1430.—Simpson, G. G. An Apatemyid from the early Eocene of New Mexico. Amer. Mus. Novit. No. 1654 1954: 1-4 1 fig.

1431.—Simpson, G. G. Tendances actuelles de la systematique des mammiferes. Mammalia, Paris 18 1954: 337-357.

1432.—Simpson, G. G. and Tobien, H. The rediscovery of Peale's Mastodon. Proc. Amer. phil. Soc. 98 1954: 279-281 1 fig.

Simpson, M. E. see Van Wagenen.

1433.—Siperstein, E. and others. Cytological changes in the rat anterior pituitary from birth to maturity. Anat. Rec. 118 1954: 593-619 24 figs.

1434.—[Siroechkovski, E. E.] [On the distribution of jerboas in sand deserts, and census methods.] Zool. Zh., Moscow 33 1954: 1403-1409 3 figs. [In Russian.]



- 1435.—Sivertsen, E. A new species of Sea Lion, *Zalophus wolfebaeki*, from the Galapagos Islands. K. Norske Vidensk. Selsk. Forh. **26** 1953: 1-3 2 figs.
- 1436.—Sivertsen, E. A survey of the eared seals (family *Otariidae*) with remarks on the Antarctic seals collected by M/K "Norvegia" in 1928-1929. Norske Vidensk.-Akad. Oslo (Sci. Res. Norweg. Antarct. Exped. 1927-1928 No. 36 1954: 1-76 10 pls. 46 figs.
- 1437.—Skead, C. J. The last of the Cape reed buck. S. Afr. Dep. Nat. Cons. Rep. 10 1953: 23-26.
- 1438.—Skreb, N. Experimentelle Untersuchungen über die äusseren Ovulationsfaktoren bei der Fledermaus *Nyctalus noctula*. Naturwissenschaften **41** 1954: 484.
- 1439.—Skuratowicz, W. Fossil remnants of *Talpa europaea* L. and of *Arvicola terrestris* L. found in glacial formations near Tezew. Bull. Inst. Geol. Warsaw **5** 1954: 253-257 1 pl. [Polish with English summary.]
- 1440.—Skuratowicz, W. and Warchalevski, E. Notice on the fauna of small mammals of the Sub-Carpathian region. Wydz. mat. przyr. Kom. Biol. **15** 1954: 1-11. [English summary.]
- 1441.—Slack, H. G. B. Metabolism of elastin in the adult rat. Nature, Lond. **174** 1954: 512-513.
- 1442.—Slijper, E. J. On the importance of measuring the thickness of the layer of blubber in whales. Norsk. Hvalfangsttid. **43** 1954: 510-516 2 figs.
- Slizynski, B. M. see Falconer.
- 1443.—Sluiter, J. W. Sexual maturity in bats of the genus *Myotis*. II. Females of *M. mystacinus* and supplementary data on female *M. myotis* and *M. emarginatus*. Proc. Acad. Sci. Amst. **57C** 1954: 696-700 14 figs.
- 1444.—Sluiter, J. W. and Heerdt, P. F. van. Waarnemingen over de verspreiding van enige vleermuissoorten in Midden-Nederland. Levende Nat. **57** 1954: 15-18, 35-38 map.
- 1445.—Sluiter, J. and Heerdt, P. F. van. Het voorkomen van de vole vleermuis in Nederland. Levende Nat. **57** 1954: 75-78 1 fig.
- 1446.—Sluiter, J. W. and Heerdt, P. F. van. Waar blijven de Zuid-Limburgse vleermuizen des zomers? Levende Nat. **57** 1954: 229-232.
- Sluiter, J. W. see Heerdt.
- Sluys, G. K. van der see Husson.
- 1447.—Smith, A. V., Lovelock, J. E. and Parkes, A. S. Resuscitation of hamsters after supercooling or partial crystallization at body temperatures below 0°C. Nature, Lond. **173** 1954: 1136-1137.
- 1448.—Smith, D. E., Lewis, Y. S. and Svihla, G. Prolongation of clotting time in the dormant bat (*Myotis lucifugus*). Experimentia **10** 1954: 218.
- 1449.—Smith, E. Studies on the life history of non-cave-dwelling bats in Northeastern Ohio. Ohio J. Sci. **54** 1954: 1-12 3 figs.
- 1450.—Smith, J. W. The elastic properties of the anterior cruciate ligament of the rabbit. J. Anat., Lond. **88** 1954: 369-380 1 pl. 2 figs.
- Smith, P. see Hoecker.
- 1451.—Smith, W. W. Reproduction in the house mouse *Mus musculus* L., in Mississippi. J. Mammal. **35** 1954: 509-515.
- 1452.—Snell, G. D., Dickie, M. M., Smith, P. and Kelton, D. E. Linkage of loop-tail, leaden, splotch and fuzzy in the mouse. Heredity **8** 1954: 271-273.
- 1453.—Snyder, D. P. Skull variation in the meadow vole (*Microtus p. pennsylvanicus*) in Pennsylvania. Ann. Carnegie Mus. **33** 1954: 201-234 7 figs.
- Sobey, S. see Fraser.
- 1454.—[Sokolov, I. I.] [Natural classification of Bovidae.] Trav. Inst. zool. Acad. Sci. U.R.S.S. **14** 1954: 3-295 22 pls. 39 figs. [In Russian.]
- 1455.—[Sokolov, V. E.] [New species of field vole in the U.S.S.R.] Zool. Zh., Moscow **33** 1954: 947-950 2 figs. [In Russian.]
- 1456.—[Sokolovskaya, I. I. and Drozdova, L. P.] [On some problems regarding the fertilization of animals.] J. gen. Biol., Moscow **15** 1954: 439-445 7 figs. [In Russian.]
- Somers, M. see Moir.

1457.—Sorsby, A. and Davey, J. B. Ocular associations of dappling (or merling) in the coat colour of dogs. I. Clinical and genetical data. *J. Genet.* 52 1954: 425-440.

1458.—Sorsby, A. and others. Retinal dystrophy in the mouse: histological and genetic aspects. *J. exp. Zool.* 125 1954: 171-197 20 figs.

1459.—Southern, H. N. The study of British small mammals. *Bull. Mammal. Soc. Brit. Is.* 1 1954: 6-8.

1460.—Southern, H. N. Key to identification of small mammal skulls in owl pellets. *Bull. Mammal. Soc. Brit. Is.* 2 1954: 14.

1461.—Southern, H. N. House mice and men. *Ctry. Life, Lond.* 116 1954: 1060-1062 8 figs.

1462.—Southern, H. N. A year of rabbit plague. *Ctry. Life, Lond.* 116 1954: 1948-1949 3 figs.

Southern, H. N. *see* Chitty.

1463.—Southwick, C. H. Canine teeth in a Wisconsin white-tailed deer fauna. *J. Mammal.* 35 1954: 456-457.

1464.—Sowerby, A. de C. No longer a mystery—the range of Father David's Deer. *Anim. Kingd.* 57 1954: 83-85 2 figs. 1 map.

1465.—Spahni, J.-C. Une grotte à *Ursus spelaeus*, à Tanaz sur Vouvy (Valais). *Bull. Murith. No.* 66 1949: 73-77.

Sparrow, E. M. *see* Billingham.

1466.—Spatz, H. Das Hypophysen-Hypothalamus-System in seiner Bedeutung für die Fortpflanzung. *Verh. anat. Ges. Jena* 51 1954: 46-86 19 figs.

Speaker, E. B. *see* Sanderson.

Spencer, D. L. *see* Buckley.

1467.—[Spencer], H. E. P. The new telephone exchange, Ipswich. *Trans. Suffolk Nat. Soc.* 8 [1954]: 194-195.

Spicer, C. C. *see* Fraser.

1468.—Spiegel, A. Beobachtungen und Untersuchungen an Javamakaken. *Zool. Gart., Lpz.* 20 1954: 227-270 24 figs.

Sprankel, H. *see* Schmidt.

1469.—Spring, R. Temporo-mandibular meniscectomy in rabbits. *J. Anat., Lond.* 88 1954: 514-519 1 pl.

1470.—Srivastava, S. C. Contributions to our knowledge of the structure of the placenta of *Panthera tigris tigris* (Linn). *Agra. Univ. J. Res. Sci.* 1 1952: 37-45 10 figs.

1471.—Staats, J. A classified bibliography of inbred strains of mice. *Science* 119 1954: 295-296 1 fig.

1472.—Stach, J. Nyctereutes (Canidae) w pliocenie Polski. Studia nad trzeciorzędowa fauna brekcji kostnej w miejscowosci Weze kolo Dzialoszyna. Czesz IV. *Acta Geol. Polon.* 4 1954: 191-206 2 pls. 1 fig. [Polish with English summary.]

1473.—Stahl, A. and Seite, R. Cyto-logie des cellules nerveuses de l'hypothalamus. *Pubbl. Staz. zool. Napoli* 24 Suppl. 1954: 24.

1474.—Stains, H. J. and Baker, R. H. Deciduous teeth in the hognose bat. *Choeronycteris mexicana*. *J. Mammal.* 35 1954: 437-438.

Stains, H. J. *see* Rainey.

1475.—[Stakhovski, V. V.] [Improved trap for catching small mammals.] *Bull. Soc. Nat. Moscow biol.* 59 5 1954: 96 fig. [In Russian.]

1476.—Stallup, W. B. Weight-carrying ability of the red bat. *Field & Lab.* 22 1954: 82.

1477.—Starck, D. Morphologische Untersuchungen am Kopf der Säugtiere, besonders der *Prosimier*, ein Beitrag zum Problem des Formwandels des Säugerschädels. *Z. wiss. Zool.* 157 1954: 169-219 16 figs.

1478.—Starrett, A. Longtail shrew, *Sorex dispar*, in Maine. *J. Mammal.* 35 1954: 583-584.

1479.—Stegeman, L. C. Variation in a colony of little brown bats. *J. Mammal.* 35 1954: 111-113.

1480.—Stegeman, L. C. Notes on the development of the little brown bat *Myotis lucifugus lucifugus*. *J. Mammal.* 35 1954: 432-433.

1481.—Stein, G. H. W. Materialien zum Haarwechsel deutscher Insectivoren. *Mitt. zool. Mus. Berl.* 30 1954: 12-34.

1482.—Steinbacher, G. Zur Biologie des europäischen Wildschweins, *Sus scrofa* Linné, 1758. *Säugetierk. Mitt.* 2 1954: 126.

- 1483.—Steinbacher, G. Zur Psychologie der Gross-Säuger. Säugetierk. Mitt. 2 1954: 174-176.
- 1484.—Steiner, P. E. Anatomical observations in a *Gorilla gorilla*. Amer. J. phys. Anthropol. 12 1954: 145-180 18 figs.
- 1485.—Steiniger, F. Rattenbiologie und Rattenbekämpfung, einschliesslich der Toxikologie gebräuchlicher Rattengifte. Stuttgart (Ferdinand Enke) 1952: vii + 149 33 figs. [N.V.]
- 1486.—Steiniger, F. Über das Anlocken von Ratten durch Pfeiftöne. Z. Tierpsychol. 11 1954: 141-143.
- 1487.—Stellar, E. and Krause, N. P. New stereotaxic instrument for use with the rat. Science 120 1954: 664-665 1 fig.
- 1488.—Stepanek, O. Klic Nasich Obratlovci [Key to Czech vertebrates]. Orbis-Praha 1950: pp. 250 113 figs.
- 1489.—Stephan, H. Vergleichend-anatomische Untersuchungen an Hirnen von Wild- und Haustieren. III. Die Oberflächen des Allokortex bei Wild- und Gefangenschaftsfüchsen. Biol. Zbl. 73 1954: 96-115 4 figs.
- 1490.—Stephan, H. Die Anwendung der Snell'schen Formel  $h = K^2 \cdot p$  auf die Hirn-Körpergewichtsbeziehungen bei verschiedenen Hunderassen. Zool. Anz. 153 1954: 15-27 3 figs.
- 1491.—Stephens, M. Otter research. Oryx 2 1954: 320-324 1 fig.
- Stephenson, S. K. *see* Dry.
- 1492.—Stevenson, J. R. and Walker, Jr., W. F. A case of atresia of the ileum with a divided kidney in the foetal pig. Anat. Rec. 118 1954: 211-214 1 fig.
- 1493.—Stevenson-Hamilton, J. Specimen of the extinct Cape lion (further note). Afr. wild Life 8 1954: 187-189 1 fig.
- 1494.—Steyn, T. J. The breeding of lions in captivity. Fauna & Flora, Pretoria No. 2 1951: 36-55 figs.
- 1495.—Stickel, L. F. A comparison of certain methods of measuring ranges of small mammals. J. Mammal. 35 1954: 1-15 5 figs.
- 1496.—Stieve-Miegel, B. Über Superfetation bei der Bismarrratte (*Ondatra zibethica* L.). Z. mikr-anat. Forsch. 61 1954: 82-92 4 figs.
- 1497.—Stirton, R. A. Late Miocene mammals from Oaxaca, Mexico. Amer. J. Sci. 252 1954: 634-638 2 figs.
- 1498.—Stoch, Z. G. The male genital system and reproductive cycle of *Elephantulus myurus jamesoni* (Chubb). Phil. Trans. 238B 1954: 99-126 1 pl. 4 figs.
- Stockley, C. H. *see* Hill.
- 1499.—Stolk, A. Some inflammations in Whales. II. Proc. Acad. Sci. Amst. 57C 1954: 254-257 6 figs.
- 1500.—Stolk, A. A new case of hepatic cirrhosis in the blue whale *Balaenoptera musculus* (L.). Proc. Acad. Sci. Amst. 57C 1954: 258-260 8 figs.
- 1501.—Stott, K. Northern fur seal ashore in San Diego, California. J. Mammal. 35 1954: 258.
- 1502.—Strauss, F. and Bracher, F. Das Epophoron des Goldhamsters. Rev. suisse Zool. 61 1954: 494-503 9 figs.
- Strauss, F. *see* Bloch.
- 1503.—Straus, W. L. The great Piltown hoax. Science 119 1954: 265-269.
- 1504.—Straus, W. L. Fire and the Australopithecines. Science 120 1954: 356-357.
- 1505.—Streb, J. M. Prefrontal lobotomy and anxiety reduction in the white rat. J. sci. Labs. Denison Univ. 43 1954: 145-154 1 fig.
- Strecker, R. L. *see* Morrison.
- 1506.—Street, P. Deer at Whipsnade. Ctry. Life, Lond. 116 1954: 34-35 4 figs.
- Strelina, E. D. *see* Rall.
- 1507.—Sugiyama, S. Studies of the histogenesis of the thyroid gland of the guinea pig. I. The thyroid cells (follicle cells and parafollicular cells). Anat. Rec. 120 1954: 363-377 8 figs.
- 1508.—Sugiyama, S. & Sato, T. Studies of the histogenesis of the thyroid gland of the guinea pig. II. Quantitative measurements of the follicles and correlation with function. Anat. Rec. 120 1954: 379-393 5 figs.

1509.—Sullivan, B. J. and Mullen, J. T. Effects of environmental temperatures on oxygen consumption in Arctic and temperate-zone mammals. *Physiol. Zool.* 27 1954: 21-28 1 fig.

1510.—Suomalainen, H. O. T. The effect of oestrogenic hormones on the mast cells in the mouse uterus. *Ann. zool. Soc. zool.-bot. Vanamo* 16 1954: 1-30 1 pl.

1511.—Suomalainen, H. O. T. Occurrence and significance of metachromatic substances in growing tissues. Studies on the reproductive organs of the female mouse. *Ann. zool. Soc. zool.-bot. Vanamo* 16 No. 10 1954: 1-37 2 pls.

1512.—Suomalainen, P. Further investigations on the physiology of hibernation. *S.B. finn. Akad. Wiss.* 1953 (1954): 131-144 2 figs.

1513.—Suzuki, A. On the census of coat colors in cat. *Misc. Rep. Yamashina Inst. Orn. Zool. No. 3* 1953: 125-126. [Japanese with English res.]

1514.—Svenson, G. De vita ulgarum i Kronobergs län. *Fauna og Flora* 49 1954: 177-182 2 figs.

1515.—Svihla, A. and Bowman, H. S. Hibernation in the American black bear. *Amer. Midl. Nat.* 52 1954: 248-252.

Svihla, G. *see* Smith.

1516.—[Sviridenko, P. A.] [The mode of seeking food in the soil by rodents and their conditioned responses to non-food odours. *Zool. Zh., Moscow* 33 1954: 876-888 1 fig. [In Russian.]

Swartz, G. E. *see* Celestino.

Sykes, J. F. *see* Moss.

1517.—Sykes, R. L. and French, M. H. The effect of certain drying conditions on the putrefaction of cattle hides and goatskins. *Colon. Pl. Anim. Prod.* 4 1954: 187-199.

Synge, R. L. M. *see* Annison.

Synge, R. L. M. *see* Chalmers.

1518.—Szabo, G. Studies on the cultivation of teeth *in vitro*. *J. Anat., Lond.* 88 1954: 31-44 3 pls.

1519.—Taber, R. D. and Dasmann, R. F. A sex difference in mortality in young Columbian black-tailed deer. *J. Wildlife Mgmt.* 18 1954: 309-315.

1520.—Taddei, A. Ricerche istologiche sulla ghiandola carotidea durante la gravidanza. Osservazioni su *Bos taurus* L. *Mem. Soc. tosc. Sci. nat.* 56B 1949: 31-39.

1521.—Taitz, L. S. Chromosomes of the white-tailed rat (*Mystromys albicaudatus*, Wagner, 1841). *S. Afr. J. Sci.* 51 1954: 143-148 2 figs.

1522.—Takai, F. A summary of the mammalian faunas of eastern Asia and the interrelationships of continents since the Mesozoic. *Proc. 7th Pan Pacif. sci. Congr.* 2 1953: 289-301.

1523.—Takashima, H. Considerations on the change of animal life in Japan. *Misc. Rep. Yamashina Inst. Orn. Zool. No. 3* 1953: 87-97 3 figs. [Japanese with English res.]

1524.—Takashima, H. Considerations on the change of animal life in Japan. II. *Misc. Rep. Yamashina Inst. Orn. Zool. No. 4* 1954: 146-155. [Japanese with English summary.]

1525.—Talmage, R. V. and Buchanan, G. D. The armadillo (*Dasypus novemcinctus*)—a review of its natural history, ecology, anatomy and reproductive physiology. *Rice Inst. Pamphlet* 41 2 1954: viii + 1-135 2 pls.

1526.—Talmage, R. V. and others. The presence of a functional corpus luteum during delayed implantation in the armadillo. *J. Endocrin.* 11 1954: 44-49 1 pl.

Talmage, R. V. *see* Buchanan.

1527.—Tamate, H. Histologica studies of glycogen in the hair of mammals. *Tohoku J. agric. Res.* 1 1950: 161-167 3 figs.

1528.—Tamate, H. Appearance of glycogen in skin and hair of mammal embryos. *Tohoku J. agric. Res.* 1 1950: 169-175 4 figs.

1529.—Tamino, G. Rinvenimento di una *Globicephala* sul lido di Castel-porziano (Roma). *Boll. Zool.* 20 1953: 13-16 2 pls. 1 fig.

1530.—Tamino, G. Rieupero di un *Grampus liseus* (sic.) (Cuv.) arenato sul lido di Ladispoli (Roma) il 5 aprile del 1953. *Boll. Zool.* 20 1953: 45-48 3 pls. 1 fig.



1531.—Tamino, G. Ricupero di una Balenottera arenata sul Lido di Salerno il 10 Febbraio 1953. *Boll. Zool.* 20 1953: 51–54 2 pls. 1 fig.

1532.—Tamino, G. Note anatomo-funzionali sui Cetacei. I. Osservazioni sul nuoto di *Grampus griseus* (Cuv.). *Boll. Zool.* 20 1953: 107–113 3 pls.

1533.—Tamino, G. Note sui Cetacei VIII. Rinvenimento di una giovane Balenottera arenata sulla spiaggia dei Maronti (Isola d'Ischia), il 16 Novembre 1953. *Atti Soc. Sci. nat.* 92 1953: 123–126 2 pls. [English summary.]

1534.—Tamino, G. Note sui Cetacei. VI. Sullo scheletro di una *Globicephala* del Museo di Roma, con particolari considerazioni sul cranio di questa e di altre specie di cetacei e di diversi mammiferi. *Atti Soc. Ital. Mus. Civ. Stor. Nat. Milano* 93 1954: 489–537 17 figs.

1535.—Tamsitt, J. R. The mammals of two areas in the Big Bend region of Trans-Pecos Texas. *Tex. J. Sci.* 6 1954: 33–61 1 fig.

1536.—Tankerville, Earl of. Chillingham wild cattle. *Ctry. Life, Lond.* 115 1954: 689.

1537.—Tanner, J. M. and Burt, A. W. A. Physique in the infra-human Mammalia: a factor analysis of body measurements of dairy cows. *J. Genet.* 52 1954: 36–51 1 fig.

Tashian, R. E. *see* Kuns.

1538.—Tate, G. H. H. Notes on mammalian distribution in the Cape York Peninsula. *Proc. 7th Pacif. Sci. Congr.* 4 1953: 32–38.

1539.—Tate, G. H. H. A new squirrel from Burma. *Amer. Mus. Novit.* No. 1676 1954: 1–2.

1540.—Tate, G. H. H. On *Cebus apella* (Linnaeus), with a note on *Cebus capucinus* (Linnaeus). *J. Mammal.* 35 1954: 415–418 1 pl.

1541.—Taylor, E. L. Grazing behaviour and helminthic disease. *Brit. J. Anim. Behav.* 2 1954: 61–62.

Taylor, J. I. *see* Harker.

1542.—Taylor, W. P. Food habits and notes on life history of the ring-tailed cat in Texas. *J. Mammal.* 35 1954: 55–63.

1543.—Taylor Page, F. J. The wild deer of East Anglia. *Trans. Norfolk Norw. Nat. Soc.* 17 1954: 316–321.

1544.—Tegner, H. Massive red deer heads. *Naturalist* No. 851 1954: 148–149 2 figs.

1545.—Tegner, H. Malformed antlers. *Ctry. Life, Lond.* 116 1954: 577 photo.

1546.—Tegner, H. Anything known? *Field.* 203 1954: 61 photo.

1547.—Tegner, H. Coalesced roe heads. *Field.* 203 1954: 453.

1548.—Tegner, H. A head for Düsseldorf. *Field.* 204 1954: 577 fig.

1549.—Tegner, H. A plea for British roe buck. *Field.* 204 1954: 668 1 fig.

1550.—Tegner, H. Stalking the fallow buck. *Field.* 204 1954: 1128 2 figs.

1551.—Tembrock, G. Rotfuchs und Wolf, ein Verhaltensvergleich. *Z. Säugetierk.* 19 1954: 152–159 1 pl. 10 figs.

1552.—Tener, J. S. A preliminary study of the musk-oxen of Fosheim Peninsula, Ellesmere Island, N.W.T. *Wildl. Mgmt. Bull. Can.* (1) No. 9 1954: 1–34 7 figs.

1553.—Tenius, K. Bemerkungen zu den Säugetieren Niedersachsens. *Beitr. Naturh. Niedersachs.* 7 1954: 1–8, 33–40, 65–78.

1554.—[Teplov, V. P.] [Influence of protection on economic mammals in Petchora Tayga.] Nasimovich, A. A., Ed. *Reorg. vert. fauna U.S.S.R. (Biotech. measures)* Moscow 1953: 70–79. [In Russian.]

1555.—[Teplov, V. P.] [Estimate of rapacious activity of brown bear.] (Material collected in game reserves.) Nasimovich, A. A., Ed. *Reorg. vert. fauna U.S.S.R. (Biotech. measures)* Moscow 1953: 153–166. [In Russian.]

1556.—[Teplov, V. P.] [The ratio of sexes in wild mammals.] *Zool. Zh., Moscow* 33 1954: 174–179. [In Russian.]

Terio, B. *see* Martino.

1557.—Theiler, K. Die Entstehung von Spaltwirbeln bei Danforth's Short-tail Maus. *Acta anat.* 21 1954: 259–282 17 figs.

1558.—Thenius, E. Ergebnisse der Bearbeitung der alpeleiozänen Caniden von Hundsheim in Niederösterreich. Anz. Akad. Wiss. Wien **90** 1953: 258–259.

1559.—Thenius, E. Die Caniden (Mammalia) aus dem Altquartär von Hundsheim (Niederösterreich) nebst Bemerkungen zur Stammesgeschichte der Gattung *Cuon*. Neues Jb. Geol. Pal. Abh. **99** 1954: 230–286 33 figs.

1560.—Thenius, E. Zur Abstammung der Rotwölfe (Gattung *Cuon* Hodgson). Öst. zool. Z. **5** 1954: 377–387 2 figs.

1561.—Thenius, E. Die Bedeutung, von *Austriacopithecus* Ehrenberg für die Stammesgeschichte der Hominoidea. Anz. Öst. Akad. Wiss. **91** 1954: 191–196.

Thenius, E. *see* Papp.

1562.—Théobald, N. and Firtion, F. Découvertes paléontologiques dans la plaine alluviale du Rhin à Worth en Palatinat. Ann. Univ. saraviensis. Naturw. **2** 1953: 177–185 3 pls.

1563.—Théodoridès, J. Statistique du parasitisme par helminthes chez *Miniopterus schreibersi* Natt. (Chiroptera Vespertilionidae). Vie et Milieu **4** 1954: 127–129.

Thomas, B. H. *see* Cheng.

1564.—Thompson, G. H. Animal populations and forestry. Nature, Lond. **174** 1954: 813–815.

1565.—Thompson, H. V. The rabbit disease: myxomatosis. Ann. Appl. Biol. **41** 1954: 358–366 1 fig.

1566.—Thompson, H. V. Myxomatosis of rabbits. Agric. (J. Min. Agric.) Lond. **60** 1954: 503–508.

1567.—Thompson, H. V. Myxomatosis: recent developments. Agric. (J. Min. Agric.) Lond. **61** 1954: 317–321.

1568.—Thompson, H. V. and Armour, C. J. Methods of marking wild rabbits. J. Wildlife Mgmt. **18** 1954: 411–413 2 figs.

Thompson, H. V. *see* Church.

Thompson, H. V. *see* Ritchie.

1569.—Thomson, A. P. D. The onset of oestrus in normal and blinded ferrets. Proc. roy. Soc. **142B** 1954: 126–135 1 fig.

1570.—Thomson, A. P. D. and Zuckerman, S. The effect of pituitary-stalk section on light-induced oestrous in ferrets. Proc. roy. Soc. **142B** 1954: 437–451 6 pls.

Thomson, A. P. D. *see* Abrams.

1571.—Thomson, J. H. Vole damage to trees. Scot. For. **7** 1953: 111.

1572.—Ticehurst, N. F. Notes on the local fauna and flora for 1953. Hastings Nat. **8** 3 1954: 89–101 (Mammals p. 89).

Tiegs, O. W. *see* Agar.

1573.—[Tikhonov, V. N.] [Formation of skeleton in pig in the period of embryonic development.] Latv. P.S.R. Zinat. Akad. Vestis **2** (79) 1954: 73–82 3 diagrams. [In Russian, Latvian summary.]

1574.—Till, C. E. White-tailed deer in Colorado. J. Mammal. **35** 1954: 269.

1575.—Tiner, J. D. The fraction of *Peromyscus leucopus* fatalities caused by raccoon ascarid larvae. J. Mammal. **35** 1954: 589–592.

Tischendorf, F. *see* Curri.

1576.—Tobias, P. V. The sex-chromosomes of the gerbil, *Tatera brantsii draco*. S. Afr. J. Sci. **50** 1954: 228–254 2 pls. 23 figs.

1577.—Tobien, H. Nagerreste aus dem Mitteleozän von Messel bei Darmstadt. Notizbl. hess. Landesamt. Bodenforsch. **82** 1954: 13–29 2 pls. 2 figs.

1578.—Tobien, H. Jungtertiäre Wirbeltiere vom Höwenegg-Hegau. Umschau **54** 1954: 559–561 figs.

Tobien, H. *see* Simpson.

1579.—[Tomilin, A. G.] [Adaptable types of Cetacea (contribution to the problem of ecological classification of Cetacea).] Zool. Zh., Moscow **33** 1954: 677–692 2 figs. [In Russian.]

Tomlinson, J. D. W. *see* Harrison.

1580.—Tong, E. H. Report from Whipsnade. Zoo Life, Lond. **9** 1954: 58–62 4 figs.

1581.—Torii, H. Fauna der Ryugado Sinterhöhle in Kochi Präfektur. (Die Berichte der speläobiologischen Expeditionen VI). Annot. zool. jap. **26** 1953: 246–255 5 figs.

- 1582.—Toschi, A. Sul popolamento della Marmotta (*Marmota marmota* L.) nelle Alpi italiane. Ric. Zool. Appl. Cacc. Univ. Bologna 24 1954: 1-40 2 figs.
- 1583.—Townsend, A. C. Mr. A. de C. Sowerby. Nature, Lond. 174 1954: 723.
- 1584.—Tratz, E. P. Chronologie der Erforschung und Gefangenhaltung des Gorillas. Zool. Gart., Lpz. 20 1953: 163-170.
- 1585.—Tratz, E. and Heck, H. Der afrikanische Anthropeide "Bonobo," eine neue Menschenaffengattung. Säugetierk. Mitt. 2 1954: 97-101 6 figs.
- 1586.—Trevisan, L. Lo scheletro di *Elephas antiquus italicus* di Fonte Campanile (Viterbo). Palaeont. Ital. 44 1 1954: 1-78 5 pls. 47 figs.
- 1587.—Tribe, D. E. The influence of exercise on the selection of food by rats. Brit. J. Anim. Behav. 2 1954: 140-143.
- 1588.—Trippensee, R. E. Wildlife management. 2. Furbearers, waterfowl and fish. New York (McGraw Hill). 1953: xii + 572 ill. [N.V. Review J. Mammal. 36 1955: 148-149.]
- 1589.—Tromba, F. G. Some parasites of the hoary bat *Lasiurus cinereus* (Beauvois). J. Mammal. 35 1954: 253-254.
- 1590.—Troughton, E. The marsupial "tiger cat." Aust. Mus. Mag. 11 1954: 168-170 figs.
- 1591.—Troughton, E. The marsupial "tiger cat" birth and growth in captivity. Aust. Mus. Mag. 11 1954: 200-202 4 figs.
- 1592.—Truslove, G. M. Genetical studies on the skeleton of the mouse. V. 'Interfrontal' and 'parted frontals.' J. Genet. 51 1952: 115-122 4 figs.
- 1593.—Truslove, G. M. Genetical studies on the skeleton of the mouse. XIII. Variations in the presphenoid. J. Genet. 52 1954: 589-602 7 figs.
- 1594.—Tuchmann-Duplessis, H. and Bortolami, R. Les constituants histochimiques de l'allentoplascenta du lapin. Bull. Micr. appl. (2) 4 1954: 73-88 2 pls.
- 1595.—Tucker, R. Studies in functional and analytical craniology. I. The elements of analysis. Aust. J. Zool. 2 1954: 381-390 24 figs.
- 1596.—Tucker, R. Studies in functional and analytical craniology. II. The functional classification of mammalian skulls. Aust. J. Zool. 2 1954: 391-398 1 pl. 4 figs.
- 1597.—Tucker, R. Studies in functional and analytical craniology. III. The brevicaudate skull and its analysis. Aust. J. Zool. 2 1954: 399-411 2 pls. 13 figs.
- 1598.—Tucker, R. Studies in functional and analytical craniology. IV. More extreme forms of the brevicaudate skull. Aust. J. Zool. 2 1954 412-417 2 pls. 4 figs.
- 1599.—Tucker, R. Studies in functional and analytical craniology. V. The functional metamorphoses of the carnivorous skull. Aust. J. Zool. 2 1954: 418-426 14 figs.
- 1600.—Tucker, R. Studies in functional and analytical craniology. VI. Strains and the directions of certain vectors in the brevicaudate skull. Aust. J. Zool. 2 1954: 427-430 1 pl. 4 figs.
- 1601.—Tucker, R. Pronounced parameral differentiation in the wombat (*Lasiorchinus*). Proc. roy. Soc. Vict. 65 1954: 71-74 1 pl.
- 1602.—[Tupikova, N. V. and Kulik, I. L.] [Diurnal activity of mice and its geographical variation.] Zool. Zh., Moscow 33 1954: 433-441 5 figs. [In Russian.]
- 1603.—Turbang, J. Au sujet d'un nouveau représentant du genre *Capreolus* en Belgique: le Chevreuil de Sibérie (*Capreolus pygargus* Pall.). Bull. Inst. agric. Gembloux 21 1953: 171-175 8 figs.
- 1604.—Turček, F. J. A contribution to the ecology of some small mammals in Slovakia. Mém. Soc. zool. tchéosl. 15 1951: 515-553. [Czech with English summary.]
- 1605.—Turček, F. J. Ecological analysis of the bird and mammalian population of a primeval forest on the Pol'ana mountain (Slovakia). Bull. int. Acad. Prague 53 1953: 81-105 8 pls. 11 figs.
- 1606.—Turpin, R. and Lejeune, J. Analogies entre le type dermatoglyphique palmaire des singes inférieurs et celui des enfants atteints de mongolisme. C.R. Acad. Sci. Paris 238 1954: 395-397.

1607.—Tusques, J. Ouverture palpebrale et développement du globe oculaire sous l'action de la thyroxine chez la Taupe (*Talpa europaea* L.). C.R. Acad. Sci. Paris **238** 1954: 2562-2564 1 fig.

1608.—Tweedie, M. W. F. The Stone Age in Malaya. J. Malay. Br. Asiat. Soc. **26** 1953: 1-90 10 pls. 50 figs.

1609.—Tweedie, M. W. F. and Harrison, J. L. Malayan Animal Life. London (Longmans Green and Co.) 1954: ix + 237 154 figs. [Mammals pp. 1-30.]

1610.—Tyzowsky, A. Das Wesen des "Typus" bei den Säugetieren. Verh. Zool.-bot. Ges. Wien **93** 1954: 72-80 3 figs.

1611.—Uchida, T. Studies in the embryology of the Japanese house bat *Pipistrellus tralatlitis abramus* (Temminck). I. On the period of gestation and the number of litter. Sci. Bull. Fac. Agric. Kyushu Univ. **12** 1 1950: 11-14.

1612.—Udagawa, T. The gem-faced civet occurring in the central part of Honshu. Misc. Rep. Yamashina Inst. Orn. Zool. No. 4 1954: 174-175. [Japanese with English summary.]

1613.—Ullrich, H. Brunft, Tragzeit und Umwelt. Zool. Gart., Lpz. **20** 1953: 153-159.

1614.—Ullrich, W. Das Verhalten des Schimpansen, *Pan tr. troglodytes* (Blumenbach, 1799) beim Sprung. Säugetierk. Mitt. **2** 1954: 125-126 3 figs.

1615.—Ullrich, W. Zur Frage des Sichselbstbespuckens bei Säugetieren. Z. Tierpsychol. **11** 1954: 150.

1616.—Urbain, A. Biologie de l'Oryctérope. Misc. Zool. H. Schouteden, Ann. Mus. Roy. Congo Belge (N.S.) Sci. Zool. **1** 1954: 101-105 2 figs.

1617.—Urbain, A., Nouvel, J., Ballier, P. and Rinjard, J. Rapport sur la mortalité et la natalité enregistrées au Parc Zoologique du Bois de Vincennes pendant l'année 1953. Bull. Mus. Hist. nat. Paris (2) **26** 1954: 171-187.

1618.—[Ushkov, S. L.] [Migrations of roe-buck in Southern Ural.] Bull. Soc. Nat. Moscow biol. **59** 5 1954: 9-12. [In Russian.]

1619.—Vallée, L. Migration du rat musqué (*Fiber zibethicus* Gmel.) dans le département de la Mayenne. Bull. Soc. zool. Fr. **79** 1954: 105-108 1 fig.

1620.—Vallois, H. V. La capacité crânienne chez les primates supérieurs et le "Rubicon cérébral." C.R. Acad. Sci. Paris **238** 1954: 1349-1351.

1621.—Vanden Eeckhoudt, J. P. Quelques aspects de la faune provinciale (Mammifères-Reptiles-Batraciens-Insectes-Mollusques). Nat. belges **35** 1954: 81-103 9 figs.

1622.—Vanden Eeckhoudt, J.-P. Faune élémentaire des mammifères de Belgique. Nat. belges **35** 1954: 3-50 19 figs.

1623.—Van der Bijl, W. and Harrison, J. L. Moonlight and the pregnancy of Malayan forest rats. Nature, Lond. **173** 1954: 1002-1003.

1624.—Van der Horst, C. J. *Elephantulus* going into anoestrus; menstruation and abortion. Phil. Trans. **238B** 1954: 27-61 53 figs.

1625.—Van der Merwe, N. J. The black-backed jackal and natural balance. Fauna & Flora, Pretoria No. **3** 1953: 28-33.

1626.—Van der Merwe, N. J. The coyote and the black-backed jackal. A comparison of certain similar characteristics. Fauna & Flora, Pretoria No. **3** 1953: 44-51 2 figs.

1627.—Van der Merwe, N. J. The jackal. Fauna & Flora No. **4** 1953: 3-8 2 figs.

1628.—Van Gelder, R. G. and Hoffmeister, D. F. Canine teeth in white-tailed deer. J. Wildlife Mgmt. **17** 1953: 100 1 fig.

Vangstein, E. see Jahn.

1629.—Van Reen, R. and Pearson, P. B. Nutritional studies with the white-throated wood rat (*Neotoma mexicana*). Science **120** 1954: 571-573.

1630.—Van Wagenen, G. and Simpson, M. E. Testicular development in the Rhesus monkey. Anat. Rec. **118** 1954: 231-251 23 figs.

1631.—[Varshavski, S. N. and Shilov, M. N.] [Calculation of the populations of colonies of *Rhombomys opimus* from the ear and some results of its practical application.] Bull. Soc. Nat. Moscow biol. **59** 3 1954: 37-48. [In Russian.]



- 1632.—Vaughan, T. A. A new subspecies of bat (*Myotis velifer*) from Southeastern California and Arizona. Publ. Mus. nat. Hist. Univ. Kansas 7 1954: 507–512.
- 1633.—Vaughan, T. A. Mammals of the San Gabriel mountains of California. Publ. Mus. nat. Hist. Univ. Kansas 7 1954: 513–582 4 pls. 1 fig.
- 1634.—Vaughan, T. A. and Krutzsch, P. H. Seasonal distribution of the hoary bat in southern California. J. Mammal. 35 1954: 431–432.
- Vaughan, T. A. *see* Findley.
- 1635.—Velich, R. Notes on mammals from eastern Nebraska. J. Mammal. 35 1954: 429–430.
- 1636.—Venge, O. A simplified method for spreading the chromosomes in the rabbit blastocyst. Nature, Lond. 174 1954: 608 1 fig.
- 1637.—Venters, H. D., Hoffert, W. R. Scatterday, J. E. and Hardy, A. V. Rabies in bats in Florida. Amer. J. publ. Hlth. 44 1954: 182–185.
- 1638.—[Vereshchagin, N. K.] [History of Pleistocene and Holocene mammalian fauna in the middle course of Ural River.] Bull. Comm. Study Quatern. Period, Moscow (Acad. Sci. U.S.S.R.) 18 1953: 39–50 3 figs. [In Russian.]
- 1639.—[Vereshchagin, N. K.] [*Poephagus baikalensis* N. Ver., spec. nova from Pleistocene fauna of eastern Siberia.] C.R. Acad. Sci. URSS n.s. 99 1954: 455–458 pl. [In Russian.]
- 1640.—[Vereshchagin, N. K. and Gromov, I. M.] [The collection of remains of higher vertebrates of the Quaternary period.] Workers Handbook Series, Zool. Inst. Acad. Sci. URSS 20 1953: 1–36 9 figs.
- 1641.—Verhaart, W. J. C. Fiber tracts and fiber patterns in the anterior and the lateral funiculus of the cord in *Macaca ira*. Acta anat. 20 1954: 330–373 38 figs.
- 1642.—Verhey, C. J. Contribution à la connaissance des mammifères du Biesbosch, de l'île de Dordrecht et des environs. Mammalia, Paris 18 1954: 405–419 2 maps.
- 1643.—Verheyen, R. Contribution à l'ethologie du buffle noir *Bubalus caffer* (Sparrman). Mammalia, Paris 18 1954: 364–370.
- 1644.—Verheyen, R. Monographie éthologique de l'hippopotame (*Hippopotamus amphibius* Linné). Inst. Parcs. Nation. Congo Belge (Explor. Parc Nation. Albert), Brussels 1954: 1–91 31 figs.
- Vervoort, W. *see* Dissel-Scherft.
- 1645.—Vesey-Fitzgerald, D. F. Wild life in Kenya—a consideration of animals and their habitats. Oryx 2 1954: 286–293 map.
- 1646.—Vesey-Fitzgerald, D. F. Wild life in Tanganyika—a consideration of animals and their habitats. Oryx 2 1954: 357–365 1 pl. 1 map.
- 1647.—Vesey-Fitzgerald, D. F. Ordeal by drought. Field, Lond. 203 1954: 351 2 figs.
- 1648.—Vialli, V. Un nuovo scheletro di Orso delle caverne del Museo Civico di Storia Naturale di Milano. Natura, Milano 45 1954: 38–42 1 fig.
- 1649.—[Vialov, O. S. and Flerov, K. K.] [New vertebrate tracks in the Dobrotovsk beds of Precarpathia.] C.R. Acad. Sci. URSS n.s. 90 (3) 1953: 465–467 figs.
- 1650.—Vidović, V. and Popović, V. The role of the adrenals and thyroid during winter sleep of the ground squirrel. Arh. biol. Nauk 5 1953: 171–189 4 figs. [English summary.]
- 1651.—Vietinghoff-Riesch, A. F. v. Einmieter im Steinkruger Versuchssrevier für Vogelschutz während des Sommers und Herbstes 1953. Beitr. Naturk. Niedersachs. 7 1954: 8–10.
- 1652.—Villa R., B. Nota acerca de los murciélagos del Museo Alfredo Duges. Rev. Soc. Mex. Hist. Nat. 14 1953: 151–155.
- 1653.—Villa R., B. Nota acerca de la duración del periodo de gestación de una venada cola blanca (*Odocoileus virginianus mexicanus*) de Tepecuacuilco, Gro. An. Inst. Biol. Univ. Méx. 24 1953: 459–460.
- 1654.—Villa R., B. Distribución actual de los castores en México. An. Inst. Biol. Univ. Méx. 25 1954: 443–450 2 pls. map.
- 1655.—Villa R., B. Contribución al conocimiento de las épocas de caída y nacimiento de la cornamenta y de sa

terciopelo en venados cola blanca (*Odocoileus virginianus*) de San Cayetano, Estado de Mexico, Mexico. An. Inst. Biol. Univ. Méx. 25 1954: 451-461 4 figs

Villa R., B. *see* Baker.

1656.—Villalta, J. F. de. Dos nuevos yacimientos de mamíferos cuaternarios en el Macizo de Garraf. Mem. Comun. Inst. Geol. Dip. Prov. Barcelona 10 1953: 91-93.

1657.—Villalta-Comella, J. F. de. Les biocénoses du Miocène continental du Vallès-Penedès. Ann. Paleont. 40 1954: 107-114.

Villalta-Comella, J. F. de *see* Masachs Alavedra.

Villiers, A. *see* Dekeyser.

Vilter, V. *see* Bornschein.

1658.—Vincent, J. Recherches sur la constitution de tissu osseux compact. Arch. Biol., Paris 65 1954: 531-569 3 pls.

1659.—Vincke, I., Peeters, E. and Frankie, G. Essai d'étude d'ensemble sur la *Plasmodium berghei*. Bull. Inst. colon. belge 24 4 1953: 1364-1406.

1660.—[Vinogradov, B. S.] [Systematic review of animals of the forest zone. I. Mammals.] Anim. World U.S.S.R. (ed. L. V. Arnoldi) 4 1953: 84-125 33 figs. [In Russian.]

1661.—[Vinogradov, B. S., Novikov, G. A. and Portenko, L. A.] [Atlas of game and economic birds and animals of U.S.S.R. Vol. 2. Animals.] Zool. Inst. Acad. Sci. U.S.S.R. Moscow 1953: 294 70 col. pls. text figs.

1662.—Viret, J. Sur les caractères odontologiques distinctifs des Équidés. C.R. Acad. Sci. Paris 238 1954: 1056-1058.

1663.—Viret, J. Le loess a banes durcis de Saint-Vallier (Drome), et sa faune de mammifères Villafranchiens. Nouv. Arch. Mus. Hist. nat. Lyon No. 4 1954: 1-200 33 pls. 43 figs.

1664.—Vitalis, I. A Soproni *Deinotherium giganteum* Kaup-fogak. Foldt. Kozlon. 84 1954: 370-375 3 pls.

1665.—Vleeschouwers, C. A propos de l'éléphant nain (*Loxodonta pumilio* Noack). Zooleo No. 23 1953: 187-189 1 fig.

1666.—Voipio, P. Jänisten asema eldinjärjestelmässä. Luonnen Tutk. 58 1954: 1-12 3 figs.

1667.—[Voronov, A. G.] [Peculiarities of food composition in some rodents.] Zool. Zh., Moscow 33 1954: 184-196 2 figs. [In Russian.]

1668.—Vries, H. de. Een en andre over de huisspelmuis. Levende Nat. 57 1954: 81-84 6 figs.

1669.—Vrydagh, J. M., Caram, M. and Petter, F. Les fossiles de demain. Treize mammifères menacés d'extinction. Pro Natura, Union Int. Prot. Nat., Brussels 1954: iv + 107 18 figs.

1670.—Vuletić, A. Brèche diluviale osseuse à Marjan. Bilj. Inst. oceanogr. Split No. 7 1953: 1-3.

1671.—Waage, S. The morphology of the hypophysis in some Artiodactyla. K. fysiogr. Sällsk. Lund Förh. 23 1954: 13-17 4 figs.

1672.—Wadhvani, T. K. Effect of fluorine on the composition of bones: changes in the composition of bones of rats.—Part I. Proc. Indian Acad. Sci. 39B 1954: 223-235.

1673.—Wager, V. A. Training the African elephant. Afr. Wild Life 8 1954: 333-339 6 figs.

1674.—Wahrman, J. and Zahavi, A. Intra-generic difference in chromosome numbers of spiny mice (*Rodentia: Murinae*). Bull. Res. Council. Israel 3 1953: 265.

1675.—Wakefield, N. A. The rediscovery of the Rock-Wallaby in Victoria. Vict. Nat., Melb. 70 1954: 202-206 4 pls. 1 plan.

1676.—Wakefield, N. A. Observations on marsupial mice. Vict. Nat., Melb. 71 1954: 6-8.

1677.—Walker, B. E. and Boothroyd, E. R. Chromosome numbers in somatic tissues of mouse and man. Genetics 39 1954: 210-219 1 pl.

1678.—Walker, D. G. Fructose in the foetal fluids of deer. Nature, Lond. 173 1954: 309-310 1 fig.

1679.—Walker, E. P. The monkey book. New York (The MacMillan Co.) 1954: xii + 154; figs.

Walker, W. F. *see* Stevenson.

1680.—Wallace, F. Red stags in Holland. Field. 203 1954: 352-353 3 figs.

1681.—Wallace, F. Düsseldorf trophies. Field. 204 1954: 377 2 figs.

- 1682.—Wallace, F. Behind the scenes at Düsseldorf. *Field.* 204 1954: 795 3 figs.
- 1683.—Wallace, F. British heads at Düsseldorf. *Field.* 204 1954: 880-881 6 figs.
- 1684.—Wallace, H. F. Red deer in Scotland. *Oryx* 2 1954: 329.
- 1685.—Wallace, M. E. A mutation or a crossover in the house mouse? *Heredity* 8 1954: 89-105.
- 1686.—Waller, A. Deer from Asia—in Essex. *Field.* 203 1954: 748.
- 1687.—Wallmo, O. C. and Gallizioli, S. Status of the coati in Arizona. *J. Mammal.* 35 1954: 48-54 1 fig.
- 1688.—Walz, R. Neue Untersuchungen zum Domestikationsproblem der altweltlichen Camelidae. Beiträge zur ältesten Geschichte des zweihöckrigen Kamels. *Z. Deutsch. Morgenl. Ges.* Wiesbaden 104 1954: 45-87. [N.V.]
- Warchalenski, E. *see* Skuratowicz.
- Waring, H. *see* Moir.
- 1689.—Wassif, K. The bushy-tailed gerbil *Gerbillus calurus* Thomas, of South Sinai. *J. Mammal.* 35 1954: 243-248 1 pl. 3 figs.
- 1690.—Wassif, K. On a collection of mammals from Northern Sinai. *Bull. Inst. Désert d'Egypte* 3 1 1954: 107-118 map.
- 1691.—Wassif, K. and Hoogstraal, H. The mammals of South Sinai, Egypt. *Proc. Egypt. Acad. Sci.* 9 1954: 63-79 1 pl.
- 1692.—Watson, J. S. Reingestion in the wild rabbit, *Oryctolagus cuniculus* (L.). *Proc. zool. Soc. Lond.* 124 1954: 615-624 1 pl. 2 figs.
- 1693.—Watson, J. S. Breeding season of the wild rabbit in New Zealand. *Nature, Lond.* 174 1954: 608-609 1 fig.
- 1694.—Webb, O. L. *Perognathus nelsoni canescens* in New Mexico. *J. Mammal.* 35 1954: 453.
- Weddell, G. *see* Pallie.
- 1695.—Weimer, H. E. and others. A comparison of serum glycoprotein concentrations in four species of mammals. *Physiol. Zool.* 27 1954: 341-345.
- 1696.—Weiner, J. S. and Oakley, K. P. The Piltdown fraud: available evidence reviewed. *Amer. J. Phys. Anthropol.* 12 1954: 1-7.
- 1697.—Weissenfeld, N. Das natürliche Ergrauen und die experimentelle Depigmentierung der Haare. *Biol. Zbl.* 73 1954: 399-414 22 figs.
- 1698.—Weller, R. A. and Gray, F. V. The passage of starch through the stomach of the sheep. *J. exp. Biol.* 31 1954: 40-48. 1 fig.
- Weller, R. A. *see* Gray.
- 1699.—Werner, Cl. F. Beobachtungen über den akustischen Ohrmuschelreflex (Preyerreflex) beim Meer-schweinchen. *Zool. Anz.* 152 1954: 1-10 3 figs.
- Werner, H. J. *see* Dalquest.
- Wernert, P. *see* Pales.
- Westenhöfer, M. *see* Frechhop.
- 1700.—Westermann, J. H. Nature preservation in the Caribbean. A review of literature on the destruction and preservation of flora and fauna in the Caribbean area. *Natuurwet. Stud. Suriname No. 9* 1953: 1-106 25 figs. map. [Mammals pp. 23-31.]
- 1701.—Wettstein, O. V. Über die Rüttelmäuse Österreichs. *Säugetierk. Mitt.* 2 1954: 118-124.
- 1702.—Wettstein, O. Auf der Fährte der letzten Wildziegen Europas. *Oesterr. Weidwerk* 1954: 3-4, 29-31 figs. [N.V.]
- 1703.—Weymouth, R. J. and Baker, B. L. The presence of angyrophilic granules in the parenchymal cells of the parathyroid glands. *Anat. Rec.* 119 1954: 519-527 8 figs.
- 1704.—White, I. G. The effect of some seminal constituents and related substances on diluted mammalian spermatozoa. *Aust. J. biol. Sci.* 7 1954: 379-390.
- 1705.—White, T. E. Preliminary analysis of the fossil vertebrates of the Canyon Ferry Reservoir area. *Proc. U.S. nat. Mus.* 103 1954: 395-438 12 figs.
- 1706.—White, T. H. The book of beasts. Being a translation from a Latin bestiary of the twelfth century. (London (Jonathan Cape) 1954: pp. 296 text illust.
- 1707.—Whitehead, G. K. Rare animals at Woburn—the preservation work of the late Duke of Bedford. *Oryx* 2 1954: 216-220 2 figs.

- 1708.—Whitehead, G. K. Red deer in Scotland. *Oryx* 2 1954: 246-247.
- 1709.—Whitehead, G. K. Red deer in Scotland. *Oryx* 2 1954: 393-394.
- 1710.—Whitehead, G. K. The deer stalking season. *Field*. 203 1954: 597-598 6 figs.
- 1711.—Whitehead, G. K. Deer from Asia at home in England. *Field*. 203 1954: 663 3 figs.
- 1712.—Whitehead, G. K. Sheep from the past. Some light thrown on the past history and the possible origins of the Spanish proband and the park St. Kilda sheep. *Field*. 204 1954: 662 3 figs.
- 1713.—Whitehead, G. K. Ancestry of Wild White cattle. *Ctry. Life, Lond.* 115 1954: 869-870.
- 1714.—Whitehead, G. K. Black Sika deer at Whipsnade. *Ctry. Life, Lond.* 116 1954: 371 2 figs.
- 1715.—Whitehead, G. K. Stag's deformed head. *Ctry. Life, Lond.* 116 1954: 503 photo.
- 1716.—Whitehead, G. K. Epping Forest and its deer. *Ctry. Life, Lond.* 116 1954: 810-811 4 figs.
- 1717.—Whitehead, G. K. Reindeer-stalking in Norway. *Ctry. Life, Lond.* 116 1954: 1662-1663 4 figs.
- 1718.—Whitehead, G. K. Why no close season for deer? *Ctry. Life, Lond.* 116 1954: 2098, 2268. 2 figs.
- 1719.—Whitehead, G. K. West Country stag's heads. *Ctry. Life, Lond.* 116 1954: 2324 2 figs.
- 1720.—Whiteley, H. J. and Ghadially, F. N. Hair replacement in the domestic rabbit. *J. Anat., Lond.* 88 1954: 13-18 3 pls. 1 fig.
- 1721.—Whitmore, F. C. Cranial morphology of some Oligocene Artiodactyla. *U.S. Geol. Surv. Prof. Pap. Wash.* 243-H 1953: 117-160 18 figs.
- 1722.—Whittell, H. M. John Gilbert's notebook on marsupials. *W. Aust. Nat.* 4 1954: 104-114.
- 1723.—Whitworth, T. The Miocene Hyracoids of East Africa. *Foss. Mamm. Afr. No. 7 Brit. Mus. (Nat. Hist.)* 1954: 1-58 7 pls. 19 figs.
- Whyley, G. A. *see* Ponsford.
- 1724.—Wichmann, H. Kleinsäuger als Feinde des Buchdruckers, *Ips typographus* (Linné, 1758) (Coleoptera). *Säugetierk. Mitt.* 2 1954: 60-66.
- 1725.—Wiedorn, W. S. A new experimental animal for psychiatric research: The opossum *Didelphis virginiana*. *Science* 119 1954: 360-361.
- 1726.—Wiener, G. On the use of muzzle prints in the diagnosis of monozygosity of cattle twins. *J. agric. Sci.* 44 1954: 288-292 1 fig.
- 1727.—Wijngaarden, A van. Biologie en bestrijding van de Woelrat, *Arvicola terrestris terrestris* (L.) in Nederland. *Meded. Plant. Dienst. Wageningen No. 123* 1954: 1-147 19 figs.
- Wilber, C. G. *see* Lieb.
- 1728.—Wilde, J. de and Nieuwenhoven, P. J. van. Waarnemingen betreffende de winterslaap van vleurmuizen. *Publ. natuurh. Genoot. Limburg* 7 1954: 51-83 31 figs. [English summary.]
- 1729.—Wildhagen, A. Einige Ergebnisse des phänologischen Kleinnagetierdienstes in Norwegen. *Säugetierk. Mitt.* 2 1954: 154-158 5 figs.
- 1730.—Wilke, F. Seals of northern Hokkaido. *J. Mammal.* 35 1954: 218-224 1 pl.
- 1731.—Wilkicka, Z. Researches on the development of the pineal body of guinea pigs. *Folia morph., Warsz.* 2 1951: 40-46 4 figs. [Polish with English summary.]
- 1732.—Wille, A. Muscular adaptation of the nectar-eating bats (Subfamily Glossophaginae). *Trans. Kansas Acad. Sci.* 57 1954: 315-325 10 figs.
- Williams, G. R. *see* Casselman.
- 1733.—Wilson, J. G. Influence on the offspring of altered physiologic states during pregnancy in the rat. *Ann. N.Y. Acad. Sci.* 57 1954: 517-525 3 figs.
- 1734.—Wilson-Jones, G. Ferret breeding report. *J. S. Afr. vet. med. Ass.* 24 1953: 25-29.
- 1735.—Wimsatt, W. A. The fetal membranes and placentation of the tropical American vampire bat *Desmodus rotundus murinus*, with notes on the histochemistry of the placenta. *Acta anat.* 21 1954: 285-341 50 figs.



1736.—Wingate-Gray, W. S. Deer from Asia. *Field*. 203 1954: 977.

1737.—Winqvist, G. Morphology of the blood and the hemopoietic organs in cattle under normal and some experimental conditions. *Acta Anat. Suppl.* 21 1954: 1-157 7 pls.

1738.—Winter, G. and Nunn, W. The component fatty acids of elephant seal oil. *J. Sci. Food Agric.* 1 1950: 18-21.

1739.—Winter, G. and Nunn, W. J. The component fatty acids of elephant seal oil: the distribution in the body. *J. Sci. Food Agric.* 10 1950: 311-314.

1740.—Winter, G. and Nunn, W. J. The composition of leopard seal blubber fat. *J. Sci. Food Agric.* 10 1950: 314.

1741.—Wirz, K. Ontogenese und Cerebralisation bei Eutheria. *Acta anat.* 20 1954: 318-329.

1742.—Wislocki, G. B. Antlers in female deer, with a report of three cases in *Odocoileus*. *J. Mammal.* 35 1954: 486-495 1 pl.

1743.—Wisner, A., Legoux, J. P. and Petter, F. Etude histologique de l'oreille d'un rongeur à bulles tympaniques hypertrophiées: *Meriones crassus*. *Mammalia*, Paris 18 1954: 371-374 2 figs.

Wisner, A. *see* Legoux.

1744.—Witte, E. J. Bat rabies in Pennsylvania. *Amer. J. publ. Hlth.* 44 1954: 186-187.

1745.—Wodzicki, K. Aliens in the forest. 4. Weasel-like animals. *Forest & Bird No.* 110 1953: 4-5, 12 4 figs.

1746.—Wojcieszek, Z. The periodical changes in the suprarenal cortex of the hedgehog during one year. *Folia morph.*, Warszawa 4 1953: 211-217 6 pls. [Polish with English rés.]

1747.—Wolf, W. Spitzmäuse in Zwergmausnestern. *Säugetierk. Mitt.* 2 1954: 33-34.

1748.—Wolfgang, R. W. Studies on the endoparasitic fauna of Trinidad mammals. X. Parasites of Chiroptera. *Canad. J. Zool.* 32 1954: 20-24 5 figs.

1749.—Wolstenholme, G. E. W., Cameron, M. P. and Freeman, J. S. (ed.). Mammalian germ cells. Ciba Foundation Symposium. London (J. and A. Churchill) 1953: xvi + 302 15 pls. (N.V. Review, *Nature*, Lond. 174 1954: 899).

1750.—Womersley, H. Two new species of ectoparasitic mites from pouched mice, *Sminthopsis*, from Australia. *Rec. S. Aust. Mus.* 11 1954: 117-120 2 figs.

1751.—Wood, A. E. Comments on the classification of rodents. *Breviora* 41 1954: 1-9.

1752.—Wood, A. E. and Ormsbee, J. B. S. Notes on mammals from the Upper Cretaceous Lance formation of Wyoming. *J. Paleont.* 28 1954: 26-31 2 figs.

Wood, A. E. *see* Kelley.

1753.—Wood, H. E. Patterns of evolution. *Trans. N.Y. Acad. Sci.* (2) 16 1954: 324-336 10 figs.

1754.—Wood, J. E. Food habits of furbearers of the upland post oak region in Texas. *J. Mammal.* 35 1954: 406-415.

1755.—Woolf, B. Estimation of mutation rates. I. Visible recessive characters detected in inbred lines maintained by single sib-matings. *J. Genet.* 52 1954: 332-353 15 figs.

1756.—Woollam, D. H. M. and Millen, J. W. Perivascular spaces of the mammalian central nervous system. *Biol. Rev.* 29 1954: 251-283 9 figs.

1757.—Worden, A. N. The study of mammals in Great Britain. *Bull. Mammal. Soc. Brit. Is.* 1 1954: 5.

Worden, A. N. *see* Davies.

1758.—Wragg, L. E. The effect of D.D.T. and oil on muskrats. *Canad.Fld. Nat.* 68 1954: 11-13 2 figs.

Wrenn, T. R. *see* Moss.

1759.—Wright, A. C. A. The magical importance of pangolins among the Basukuma. Tanganyika Notes and Records 36 1954: 71-72.

1760.—Wright, N. C. Domesticated animals inhabiting desert areas. *Biology of Deserts*, Lond. 1954: 168-172.

1761.—Wyrick, R. F. Observations on the movements of the Pacific gray whale, *Eschrichtius glaucus* (Cope). *J. Mammal.* 35 1954: 596-598.

1762.—Yabe, H. and Iziri, S. Die Entdeckung der versteinten Arteria alveolaris mandibularis und Vena alveolaris mandibularis am 2M von *Desmostylella typica* Nagao. *Proc. Japan Acad.* 30 1954: 873-876 3 figs.

Yagi, T. *see* Nishiwaki.

1763.—[Yakovlev, N. G. and Kolesnikov, I. M.] [Some new data on distribution and ecology of *Mesocricetus raddei* in Rostov Province.] Zool. Zh., Moscow **33** 1954: 693-700 2 figs. [In Russian.]

Yalcinlar, I. *see* Izbirak.

1764.—Yamada, M. Some remarks on the pygmy sperm whale, *Kogia*. Sci. Rep. Whales Res. Inst. Tokyo No. 9 1954: 37-58 2 pls. 13 figs.

1765.—Yamada, M. An account of a rare porpoise, *Feresa* Gray from Japan. Sci. Rep. Whales Res. Inst. Tokyo No. 9 1954: 59-88 16 figs.

1766.—Yamauchi, S. Studies upon the Sertoli cell features of domestic animals. Bull. Naniwa Univ. **2B** 1952: 3-5 4 figs.

Yang, S. H. *see* Goodall.

1767.—Yao, T. S. and Eaton, O. N. Heterosis in the birth weight and slaughter weight in rabbits. Genetics **39** 1954: 667-676.

1768.—Yasuda, M. A description of a six-legged dog. Sci. Rep. Fac. Agric. Naniwa Univ. No. 1 1950: 157-166 3 pls.

1769.—Yeats, N. T. M. Environmental control of coat change in cattle. Nature, Lond. **174** 1954: 609-610 2 figs.

1770.—Yin, U. T. A note on the position of rhinoceros in the Union of Burma (1953). J. Bombay nat. Hist. Soc. **52** 1954: 83-87.

1771.—Yin, U. T. Thamin or Eld's deer (*Panolia eldi thamin* (Thomas)) in Burma. J. Bombay nat. Hist. Soc. **52** 1954: 205-206.

1772.—Yin, U. T. Wild life preservation and sanctuaries in the Union of Burma. J. Bombay nat. Hist. Soc. **52** 1954: 264-284 map.

1773.—Yin, U. T. A supplementary note on the status of rhinoceros and thamin (*Panolia eldi thamin*) in the Union of Burma, 1953. J. Bombay nat. Hist. Soc. **52** 1954: 301-303.

1774.—Yin, U. T. Habits of the Asiatic black bear (*Selenarctos thibetanus thibetanus* G. Cuvier). J. Bombay nat. Hist. Soc. **52** 1954: 586-587.

1775.—Yoffey, J. M. and others. A quantitative study of the effects of compound E, compound F, and compound A upon the bone marrow of the guinea-pig. J. Anat., Lond. **88** 1954: 115-130 2 pls.

Yosida, T. H. *see* Makino.

1776.—Young, S. P. Black-footed ferret (*Mustela nigripes*) in South Dakota. J. Mammal. **35** 1954: 443.

1777.—[Yurgenson, P. B.] [Supplementary feeding of predatory fur animals.] Nasimovich, A. A. Ed. Reorg. vert. fauna U.S.S.R. (Biotech. measures) Moscow 1953: 101-104. [In Russian.]

1778.—[Yurgenson, P. B.] [Influence of the marten on the numbers of squirrels in Northern Tayga.] Zool. Zh. Moscow **33** 1954: 166-173 4 figs. [In Russian.]

Zahavi, A. *see* Wahrman.

1779.—Zangwill, O. L. Localization in the cerebral cortex. Nature, Lond. **174** 1954: 718-720.

1780.—Zapfe, H. Die Fauna der miozänen Spaltenfüllung von Neudorf a.d. March (CSR.) Proboscidea. S.B. öst. Akad. Wiss. Abt. I. **163** 1-2 1954: 71-87 2 pls. 2 figs.

1781.—Zázvorka, V. Une découverte d'une partie de squelette du *Rhinoceros antiquitatis* Blumenbach dans la IV<sup>e</sup> terrasse Pléistocène de l'Elbe, à Roudnice Nad Tabem (Bohême du Nord). Čas. nár. Mus. **122** 1953: 63-67 2 figs. [French résumé.]

1782.—Zbyszewski, G. Note sur l'apparition d'ossements de mammifères dans les argiles de Coja (Arganil). Bol. Soc. Geol. Port. **11** 1953: 59-64 2 pls.

1783.—Zbyszewski, G. Note sur une mandibule d'*Isocetus* trouvée à Mutela. Bol. Soc. Geol. Port. **11** 1953: 91-92 1 pl.

1784.—Zetler, G. and Hild, W. Über die neurosekretorische Tätigkeit des hypothalamisch-neurohypophysären Systems der Säugetiere. Publ. Staz. zool. Napoli **24** Suppl. 1954: 15-17.

1785.—[Zharkov, I. V.] [The summer food of elk in Zhigulya.] Bull. Soc. Nat. Moscow biol. **59** 5 1954: 3-8. [In Russian.]

Zharkov, I. V. *see* Derevyanko.

1786.—[Zhedenov, V. N.] [Comparative anatomical study of the heart in various groups of mammals.] Zool. Zh., Moscow 33 1954: 1363-1383 18 figs. [In Russian.]

Zighera, C. Y. *see* Mayer.

1787.—Zimmermann, K. Die Scheemaus. Z. Säugetierk. 18 1953: 163-170 2 pls. 1 fig.

1788.—Zimmermann, K. Frass-Spuren von Gelbhalsmaus, *Apodemus flavicollis* (Melchior, 1834), und Waldmaus, *Apodemus sylvaticus* (Linné, 1758). Säugetierk. Mitt. 2 1954: 34.

1789.—Zimmermann, K. Dorothea M. A. Bate. Z. Säugetierk. 19 1954: 83.

1790.—Zimmermann, K. Sergej Iwanowitsch Ognew. Z. Säugetierk. 19 1954: 83-85.

1791.—Zimmermann, K. Antje Schreuder. Z. Säugetierk. 19 1954: 85.

1792.—Zinn, D. J. Albino chipmunks in Rhode Island. J. Mammal. 35 1954: 585-586.

1793.—Zuckerman, S. Prof. J. P. Hill, F.R.S. Nature, Lond. 174 1954: 109-110.

1794.—Zuckerman, S. The Australopithecine occiput. Nature, Lond. 174 1954: 263-264.

1795.—Zuckerman, S. Nuchal crests in Australopithecines. Nature, Lond. 174 1954: 1198.

1796.—Zuckerman, S. Hypothalamic-anterior pituitary relations. Pubbl. Staz. zool. Napoli 24 Suppl. 1954: 21-23.

Zuckerman, S. *see* Ashton.

Zuckerman, S. *see* Thomson.

KRUMBIEGEL 880 ; Care of primates in captivity, WALKER 1679 ; Squirrels, SHORTEN 1422 ; Control of rats and mice, CHITTY and SOUTHERN 284 ; Camel breeding textbook, LAKOZA, 904 ; Physiology of farm animals, HAMMOND 627 ; Animal legends sifted, MOORE 1083.

**Faunal Works.**—Textbook of German rodents, 3rd ed., MOHR 1077 ; Fur and game animals of U.S.S.R., VINOGRADOV and others 1661 ; Malayan animal life, TWEEDIE and HARRISON, 1609 ; Mongolia, BANNIKOV 97, 98 ; Handbook of Japanese fossils, SHIKAMA 1419 ; Checklist of N. Rhodesia, LANCASTER, 906 ; Classification of S. African mammals, with keys (in Afrikaans), ELLERMAN 419 ; Guide to S. African whales and dolphins, BARNARD 104 ; Guide to N. American mammals, PALMER 1162 ; Fossil mammals of western U.S.A., popular account, MARKMAN 1030.

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**Bibliographies.**—G. S. Miller, MILLER and JOHNSON 1068 ; Dr. H. Schouteden, ANON 22 ; Dr. R. N. Wegner's scientific works, ANON 27 ; Annotated bibliography of African fossil mammals (1742-1950), HOPWOOD and HOLLYFIELD 730 ; Middle East (including Iraq, Iran, Turkey, Syria, Lebanon, Palestine, Jordan, Arabian Peninsula), ALLOUSE 51 ; Hybridism, GRAY 590.

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†*Glyptopedius* subgen. nov. (type *G. reticulatus*) see *Glyptodon*.

†*Glyptostrakon* gen. nov. for type species *G. falkneri*, p. 402, CASTELLANOS, An. Acad. bras. Sci. 25 1953.

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